PROJECT METROPOLITAN 32

A longitudinal study of a Stockholm cohort

RESEARCH REPORT No 32

FAMILY STRUCTURE IN CHILDHOOD AND MENTAL HEALTH IN ADOLESCENCE

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Research Report Series

Director and Editor: Carl-Gunnar Janson
Managing Editor: Ann-Marie Janson

Project Metropolitan operates on grants from
The Commission for Social Research and The
Swedish Council for Planning and Coordination
of Research

Until 1986 the project was supported by The Bank
of Sweden Tercentenary Foundation

Jörgen Reklam AB

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Duncan W G Timms

Stockholm 1991

Ös
Öa

To Elizabeth

– for putting up with a distracted husband on what was supposed to be a family holiday.

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PREFACE

At age 18 or 19 most male members of the Metropolitan cohort were called to report to the local Draft Board to be examined medically and to take a number of tests so that they could be distributed among service branches for their first military service or be exempted.

During the Draft Board examinations cases of psychiatric impairment were diagnosed. The present volume in the series of research reports is the second out of three from a study by Professor Timms of such impairments. It analyzes impairment as a function of parental family structure. The first part of the study also dealt with psychiatric impairment as a function of structural factors, that is of parental social class. That part was reported in Research Report No 30: *Psychiatric Disorder and Socio-economic Status amongst a Cohort of Stockholm Boys*. The third and last part of the study will look at impairment as a function of the interaction between members of the parental family as well as of early personal characteristics of the cohort members.

The present part of the study was carried out during the six months from early June to early December 1990 when a post-doctoral scholarship from the Wenner-Gren Society made it possible for Professor Timms, on leave from the University of Stirling, Scotland, to spend most of his time with Project Metropolitan in Stockholm. The data file for the study was put together by FK Jan Andersson, who also made some of the tabulations.

Stockholm, January 1991
Carl-Gunnar Janson

INTRODUCTION

Most childhood experiences take place within a family context and, even in the case of extra–familial interactions, the experiences to which a child is exposed are likely to vary considerably according to the structural characteristics and location of the family in which he or she lives.

Several aspects of family structure may be expected to possess significance for childhood development and subsequent mental health. In the present analysis, a series of factors relating to family structure during childhood are considered in terms of their potential impact on the psychiatric health of a cohort of Swedish males in late adolescence. The cohort, which forms the basis of *Project Metropolitan*, is defined as all those born in 1953 and living in Stockholm in November 1963 (for a review and presentation see Janson 1984). The original numbers in the cohort are 7,719 males and 7,398 females.

Analysis concentrates on the experiences of the cohort during the period between their birth and late adolescence, a period spanning the years between 1953 and the early 1970s. It should be noted that this era spans what was probably the high–point of what was described at the time by Svalastoga (1954) as "the typical Scandinavian family [which] consists of husband, wife and two children". During the 1970s and 1980s far reaching changes have occurred in the nature and development of family forms in Sweden (see Popenoe 1988). The experience of later cohorts of Swedish children will, inevitably, be very different from that born in 1953. The historical specificity of the analysis which follows must always be borne in mind.

The measure of psychiatric disorder used in the analysis is derived from the records of the military Draft Board for the Stockholm district between 1971–3, when the cohort members were aged 18–20 years. Military service is compulsory for Swedish males and only men falling into certain special categories, such as seamen, serving military personnel and those suffering from severe handicaps are exempted from appearing in person before the Draft Board. Information is available on 6,928 boys, approximately 96 per cent of the population at risk. Details of the Draft Board material are given in *Project Metropolitan* Research Report No 15 (*Project Metropolitan* 1980). Data come from questionnaires filled out by the inductees, from interviews with them by psychologists and physicians and from a number of direct observations.

Two forms of assessment relating to mental health are recorded: one relating to the extent of functional impairment and the other relating to the presence or absence of symptoms of psychiatric disorder, classified according to the standard ICD schedules. In the present analysis, the diagnosis of functional impairment has been collapsed into two categories: severe impairment ("very substantial reduction of health conditions") and slight impairment. Just over 21 per cent of the cohort are categorised as suffering from some degree of impairment as the result of psychiatric conditions, with roughly equal numbers being assessed as suffering from severe and from slight degrees of impairment. The prevalence of diagnoses associated with severe impairment in the cohort as a whole is 114 per thousand; the prevalence of any psychiatric impairment is 211 per thousand. Within the set of diagnoses associated with severe impairment, approximately two–thirds fall into the category of neuroses (ICD 300) and one–eighth in each of the personality disorder and drug and/or alcohol dependence categories.

Variables describing family structure are extracted from birth records, Census returns for 1960 and 1970 and the annual population register, especially that for 1963. Extracts from each of these are contained in *Project Metropolitan* files. Attention is focussed on the marital status of the child's parents, on changes in status or the identity of one or both parents during the child–rearing process, on the size and type of family and on the age of the mother at the birth of her child. In view of the over–riding significance often claimed for the effects of social class in determining life chances, the socio–economic status of families during child–rearing, measured in terms of occupation and income, is also considered in relation to the variables describing family structure.

Many of the structural variables serve as surrogate measures of effects taking place at a social psychological level, but they may also be expected to have an independent influence, helping to determine the way in which other members of the community regard the child and his family and reflecting their correlation with the distribution of resources. The differentiation of the population according to structural variables provides a framework for the differentiation of life chances and life experiences.

Parental marital status, for example, may be expected to have significant effects on childhood development both in terms of its association with such factors as income and living standards and in terms of its potential for locating the child socially. In the 1950's it was still the case that the overwhelming majority of births took place within the context of marriage and it seems probable that being born and/or brought up in the 1950's and early–1960's in a family that was not headed by a married and cohabiting couple would be to experience some degree of relative disadvantage and might be accompanied by at least a vestige of stigmatization.

Sweden is generally assumed to have had a relatively relaxed attitude towards premarital sex and its consequences and the term "illegitimate" was legally dropped as early as 1917, but it was not until the early 1970's that the distinction between children born in– and out–of–wedlock was dropped from legislation. Popenoe (1988: 134) quotes the explicit guidance given by the National Board of Education in the 1956 edition of *The Handbook on Sex Instruction in Swedish Schools:*

> "Attention should be drawn to the fact that free liaisons for the sake of satisfying instinctual desires can result in children being born without the parents having a home to offer them . . . when sex life is started too early it is likely to be detached from its objects – home, family and children. . . . It is extremely important that pupils should realize fully that home and family are the groundrock of society, cemented together partly by love between man and woman and parents and children, partly by law. The latter is a support for the former: without it the bonds of marriage would be easier to dissolve, and this would entail great perils, especially for any children by the marriage. . . . Legal marriage has accordingly a moral value which cannot be dispensed with."

The presence or absence of one or other parent, the relationship between the child's biological and/or social parents and the nature of the regard in which the parent(s) – and by extension the child – are held by members of the community, help set the stage for socialization. In addition, changes brought about by death or by the separation of parents and changes in family personnel based on new adult liaisons can be expected to have a profound effect upon the familial social and emotional environment and thence upon the development and mental health of the child.

A number of studies have investigated the consequences of family disruption, especially that relating to the separation or divorce of parents, for the psychological development of children.

Analyses of the British National Survey of Health and Development, which consists of a sample of all children born in one week in 1946 in England, Wales and Scotland, at the age of 26 years found that psychiatric affective disorders, delinquency and a range of psychosomatic diseases among males were more common in those who had experienced family disruption in early childhood than in those who had not. The greater frequency of disorder in the group who had experienced family disruption was maintained even in the presence of controls for social class, birth order and size of household. The effects were more pronounced among boys than among girls (Wadsworth, Peckham and Taylor 1984).

Wallerstein and Kelly (1981), reporting on a longitudinal study of the children of divorcing parents in California, find that one third of the children are suffering from severe psychological disturbance five years after the divorce, and a further third have psychological difficulties. A follow–up survey ten years after the divorce found that many of the respondents were still experiencing emotional difficulties. Similar results have been reported in longitudinal studies based on the American National Survey of Children (Peterson and Zill 1986).

Some writers suggest that children from broken homes may fare better than children from unbroken but unhappy ones. Rutter (1981: 131) concludes that conduct disorders in children "are linked with broken homes not because of the separation involved but rather because of the discord and disharmony which led to the break." Reflecting on an earlier study (Rutter 1971), he points out that delinquent behaviour showed strong links with parental divorce but not with parental death: "thus it appeared that the key variable involved disturbed interpersonal relationships rather than separation" (1981: 135). In a longitudinal study of children experiencing parental divorce, Hetherington, Cox and Cox (1977) find that children's problems are exacerbated during the transition period of family disequilibrium and reorganization immediately following the break-up of a marriage, but that the effect is short-lived so that two years after the divorce the children concerned showed fewer symptoms of disturbance than those remaining in intact homes with continuing marital disharmony and conflict. At the same time, it has also been pointed out that divorcing parents tend to underestimate the emotional impact of divorce on their children. Mitchell (1985) reports that children are seldom happy that their parents finally separate rather than stay together, even if they are in open conflict with each other and there is little evidence in the research literature to suggest that children are "relieved" when bickering parents separate. Rutter (1981: 136-37), asserts that "it seems quite clear that family discord and disharmony are ... the most important damaging factors"; he goes on, however, to point out that the immediate aftermath of the dissolution of a marriage may also be traumatic: "the transition period following divorce is often a stressful one for both parents and children, with behavioural disturbance getting worse before it gets better."

Although some studies treat all forms of family disruption as being synonymous, it is generally thought that the consequences for children of family dissolution resulting from the death of one of the parents differ from those resulting from a divorce or separation (Rutter 1972). In the latter case, family breakdown generally follows a long period of parental disharmony and conflict. In some cases the child may blame himself for the breakdown and the separation may be accompanied by feelings of guilt, rejection and hostility.

In addition, separation from a parent as the result of separation or divorce is associated with considerable uncertainty, both as regards its cause and its permanency, whereas that resulting from bereavement is permanent and clear–cut. There may also be a considerable difference in the precedents to the two types of family disruption: divorce can be assumed to follow a long period of parental discord, whereas bereavement may more typically follow a period of relatively normal family relationships. Long periods of parental illness, however, have been implicated in the development of psychiatric disturbance in children (Rutter 1966).

As well as being a stressful experience in its own right, the break–up of a family during childhood, especially early childhood, is believed to give rise to deep–seated psychological adaptations. In several theoretical models, different types of disruption are presented as giving rise to different psychological structures which become part of the individual's repertoire for dealing with stress and have repercussions on later mental health.

In the approach followed in the Bedford College studies (Brown and Harris 1978, 1989), the experience of family disruption in childhood is a major factor in determining both the vulnerability of women to depression following stressful life–events and the nature of their reaction. According to Brown and Harris (1978: 255): "Loss by death may be related to psychotic–like symptoms because it tends to lead to a general attitude that one's own efforts are useless". By contrast, loss resulting from the break–up of the parent's marriage "may give a less passive cognitive set than the death of a parent. It may also cause the separation to be seen as a rejection ... Such an interpretation could prove the foundation for a life–long expectation of failure". In congruence with this hypothesis, the Camberwell data (*Ibid*: 285) show that:

> "Psychotic depressive conditions were highly related to past loss by death and neurotic depressive conditions to past loss by separation by, for example, divorce of parents or adoption of a child"

Following the work of Bowlby (1969, 1973, 1980), particular stress in the Bedford College studies is placed on the importance of early separation from the mother. Actual or threatened separation from the mother is believed to give rise to deep–seated intrapsychic changes which predispose to later disturbance. The loss of a mother before the age of eleven is presented as both a element in determining cognitive sets and as a vulnerability factor, increasing the likelihood of depressive illness in adulthood in the presence of a stressful event. The effect is seen as operating in a number of ways:

> "First, . . . it may have a crucial impact, in social terms, on the course of a girl's life: she may leave school earlier, make a hurried marriage, have her first child at an early age, fail to find satisfying work when she first leaves school just because she has no mother; and all this will mean that later in life she has fewer alternatives available to her when faced with loss. Second, we emphasise the impact of loss of mother before eleven on the woman's internal resources, her psychological strength and optimism. . . . Third, we believe the early loss may not have been 'worked through' and a later loss is therefore more likely to revive traces of the earlier experience which intensifies the current one along the lines of a reverberating circuit"
>
> (Brown and Harris 1978: 287–8)

Although the argument is developed specifically in terms of women and girls, there seems little reason why a similar argument should not also be developed in the case of men. Indeed, there is some suggestion that the effects of family disruption in childhood are especially pronounced for males (Blaxter 1986). There is also some evidence that, especially in adolescence, the loss of the same-sex parent has particular significance.

Most studies concerning the impact of the death of a parent in childhood on later mental health have concentrated on the relationship between the loss and the development of adult depression. In the majority of cases, the analysis has also been confined to women and has depended on the respondent's recall of childhood events. A number of studies have, however, investigated other forms of dis-turbance, generally finding that these are more common in those who have experienced parental bereavement in childhood (eg Greer and Gunn 1966; Rutter 1971). Supporting the notion that the experience of loss in childhood sensitizes the individual to later experiences of a similar kind, a community study in Edinburgh (Surtees 1984), found that reports of early maternal loss were associated with the development of disorder amongst women, but only when the women themselves had experienced separation or divorce.

Despite the number of studies which have considered the matter, the strength of the bereavement factor is a matter of some controversy.

Tennant *et al* (1980), in a review, suggest that either the effect of early parental loss is highly specific, relating to specific socio–demographic groups and life–events, or that the effect is general but very weak. The hypothesis developed in the Bedford College studies relating to the differential effects of parental loss in childhood resulting from death and from divorce, has been investigated in relatively few studies.

Finlay–Jones (1989), in a study of a small group of women attending general practitioners in part of London, found that the reported experience of early parental divorce was associated with the onset of anxiety in adulthood, but that other childhood separation trauma, resulting from the death of a parent or separation from a parent through illness, were unrelated to the development of anxiety. A similar finding is reported by Frommer and O'Shea (1973) in a study of the relationship between childhood experiences and marital and infant–care problems amongst a sample of new mothers: women from homes disrupted by divorce had difficulties, those from homes disrupted by the death of a parent did not.

A further area in which there is some controversy in the literature concerns the relative impact of parental death on children of different ages. Most writers, following the lead of Bowlby, believe that the "critical period" in which the loss of a parent has its most long-lasting effect is in early childhood; Rutter (1981), on the other hand, points out that severe grief reactions following bereavement are more characteristic of children in early adolescence than of younger children. Birtchnell (1970, 1980), attempting to summarize knowledge to date, concludes that while the death of a parent is clearly disturbing to a child it does not by itself give rise to lasting harm; as in other areas of family disruption, the crucial variable is the quality of parenting the child receives following the loss.

Apart from the changes reflecting family disruption and variations in the marital status and relationship of the parental couple, other aspects of the household environment may also be expected to have an influence on child socialisation. Differences in the socio–economic status of the family will help to determine the general life–chances open to the child and will also influence the way in which he is regarded by others. Variations in the size of the family, may exert an influence on socialization through the extent to which there is competition for attention and other resources and through the opportunities for peer–group backup. The presence of brothers and sisters is often seen as providing a form of protection against external stresses, though large numbers of siblings may also mean that the individual is overlooked. It seems probable that many of the factors will interact and that their influence will only become apparent in combination with later events.

Despite the common belief in the benefits of a stable married family background for healthy socialization, in the influence of family size on parent–child interaction and the economic circumstances of the family and in the negative impact of parental marital disturbance on the development of their children, there appears to be remarkably little research which has investigated the effect of different forms of parental living arrangements or changes in parental partners or statuses upon the mental health of children in later life.

Where family background factors have been investigated it has generally been in connection with *post hoc* studies in which respondents identified as cases have been invited to recall their childhood experiences. Even in the presence of well–defined controls, the problems of selective recall, including that form of selective historical reconstruction characterised as "effort after meaning" (Brown and Harris 1978), the attempt by people who have been labelled as psychologically disturbed to account for their illness in a non–threatening manner, make it dangerous to rely on such information. There is a also the possibility that childhood factors may be associated with differences in help–seeking behaviour rather than in morbidity *per se*: analyses based on identified cases will confound the two.

As in many other areas in the social sciences, where concern is with a process occurring over time, a prospective longitudinal study is likely to provide data of inherently greater validity than can cross–sectional or recall studies and provides the opportunity for disentangling temporal sequences. The data available in *Project Metropolitan* provides just such an opportunity (for a further discussion of the advantages of prospective longitudinal studies in the study of deviant behaviour and morbidity see Janson (1990) and Blaxter (1986)).

PART I: THE EFFECTS OF FAMILY STRUCTURE IN CHILDHOOD – THE STOCKHOLM EVIDENCE

1: PARENTAL MARITAL STATUS

PARENTAL MARITAL STATUS IN 1953

According to their birth records, some nine–and–a–half per cent of the Draft Board examinees in the *Project Metropolitan* cohort were born to mothers who were not married and cohabiting with their husbands. The group includes an unknown, but probably appreciable number of women, who were living with cohabitees to whom they became married after the birth of their son. Seven years later slightly less than nine per cent of the cohort, but not necessarily the same boys, were living in homes headed by a non–married adult: 1.4 per cent with single people, 1.6 per cent with widows or widowers and 5.8 per cent with a separated or divorced person. By 1970, when the members of the cohort were aged 17 years, the percentage living in "non–married" households had risen to 18: 1.7 per cent in households headed by a never–married adult, 4.7 per cent in families headed by a widow or widower and 11.8 per cent in homes headed by a separated or divorced person. Twenty boys were recorded as being heads of households in their own right.

Tables 1 to 3 show the extent to which living in a home headed by a married cohabiting adult or by by someone with another marital status is associated with the receipt of a psychiatric diagnosis in the Draft Board examination.

Regardless of whether the experience of living in a family headed by someone other than a married–and–cohabiting adult occurs at birth, in mid–childhood or in late adolescence, it is generally associated with a heightened prevalence of disorder at the age of 18 years. There are, however, considerable differences in the patterns of morbidity between boys from homes which were headed by people in the various categories of non–married status in 1960 and 1970, when the members of the cohort were aged seven and 17 years.

TABLE 1: DRAFT BOARD DIAGNOSES BY MOTHER'S MARITAL STATUS, 1953.

A: RATE PER THOUSAND

Parental Marital Status	Neur	Serious Impairment P.Dis	Dr/Al	Misc	Slight Impmnt Any	Any Impmnt	Population at risk
Married, cohab.	77	16	14	10	108	104	204	6146
Not-married	110	23	30	11	166	120	271	664
Other/md	85	8	17	8	102	153	237	118
Total	80	17	16	10	114	106	211	6928

B: RELATIVE RISK (base is mother who is married and cohabiting in 1953)

Parental Marital Status	Neur	Serious Impairment P.Dis	Dr/Al	Misc	Slight Impmnt Any	Any Impmnt	Population at risk
Married, cohab.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	6146
Not-married	1.43	1.40	2.08	1.08	1.53	1.16	1.33	664
Other/md	1.11	0.53	1.17	0.87	0.94	1.47	1.17	118
Total	1.04	1.03	1.11	1.01	1.05	1.02	1.03	6928

NOTES:

Neur(otic symptoms): includes psychoses (ICD 291-301)
P(ersonality) Dis(orders): ICD 302-303
Dr(ug)/Al(cohol) Dependence: ICD 304-305
Misc(ellaneous) Symptoms: ICD 306-309

Not-married: includes widowed, never-married, divorced and separated (married but not cohabiting

Children born to non–married mothers have a 53 per cent higher risk of receiving a psychiatric diagnosis associated with severe impairment at the age of 18 years, a 16 per cent higher risk of receiving a diagnosis of slight impairment and a 33 per cent higher risk of receiving any psychiatric diagnosis associated with impairment than do those born to mothers who are married and cohabiting. The nine–and–a– half per cent of the cohort who were born to women who were either unmarried or, if married not cohabiting, contribute 14 per cent of all the diagnoses associated with severe impairment.

The excess of diagnoses amongst those born to non–married and/or non–cohabiting mothers varies between diagnostic categories: boys born to unmarried and/or non–cohabiting mothers have twice the prevalence of serious impairment related to drug and/or alcohol dependence than do members of the cohort born to married women; in the case of neuroses and personality disorders the excess of diagnoses among boys from non–married backgrounds is 40 per cent; in the case of the "miscellaneous" serious diagnoses there is little difference in prevalence rates between the two birth categories.

Data on parental marital status at birth is missing for 1.7 per cent of the cohort. Boys in this situation show no clear prevalence pattern, having a slightly increased prevalence of any diagnosis, but a lower prevalence of serious diagnoses when compared with the rest of the population.

TABLE 2: DRAFT BOARD DIAGNOSES BY MARITAL STATUS OF HEAD OF HOUSEHOLD, 1960.

A: RATE PER THOUSAND

Parental Marital Status	Neur	Serious Impairment P.Dis	Dr/Al	Misc	Any	Slight Impmnt	Any Impmnt	Population at risk
Married, cohab.	77	15	15	10	109	106	205	5964
Never-married	71	20	0	30	111	121	222	99
Widowed	19	0	19	0	37	111	148	108
Sep/Divorced	151	35	25	10	199	124	308	403
Other/md	68	23	28	6	121	93	203	354
Total	80	17	16	10	114	106	211	6928

B: RELATIVE RISK (base is household with a head who is married and cohabiting in 1960)

Parental Marital Status	Neur	Serious Impairment P.Dis	Dr/Al	Misc	Any	Slight Impmnt	Any Impmnt	Population at risk
Married, cohab.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	6146
Never-married	0.92	1.32	0.00	3.06	1.02	1.15	1.08	99
Widowed	0.24	0.00	1.24	0.00	0.34	1.05	0.72	108
Sep/Divorced	1.96	2.28	1.66	1.00	1.83	1.17	1.50	403
Other/md	0.88	1.48	1.89	0.57	1.12	0.88	0.99	354
Total	1.04	1.03	1.11	1.01	1.05	1.02	1.03	6928

PARENTAL MARITAL STATUS IN 1960

The relationship between Draft Board diagnoses and the marital status of the parents of the cohort in 1960, when the members of the cohort are aged seven years, is similar in broad outline to that revealed in the analysis of the birth records.

Using the same categorization of parental marital status as that adopted in the case of the birth records, the increase in prevalence between boys from families headed by a married–and–cohabiting couple and those from families headed by someone with any other status is 15 per cent for diagnoses associated with slight impairment, 29 per cent for all psychiatric diagnoses and 43 per cent for those categorised as severe. Boys living in homes headed by a non–married parent in 1960 constitute one–twelfth of the cohort and contribute one–eighth of the diagnoses associated with severe impairment.

The availability of more detailed data on parental marital status from the 1960 Census enables a differentiation to be made between those in the "non–married" group whose parent or parents are classified as single (never–married), widowed and separated or divorced. As noted previously, there is considerable speculation in the literature concerning the differential effects of family disruption resulting from the death of a parent or from divorce or separation. Little attention seems to have been paid to single parents who, for whatever reason, remain unmarried.

The striking feature now revealed is the contrast in the prevalence of disorder in boys from homes which, during their early–to–mid childhood, were headed by widowed persons and those from homes headed by someone who was separated or divorced. Although boys from homes headed by a widowed person have slightly more instances of slight impairment than do those from homes headed by a married–and–cohabiting couple, they have only one–third the latter's rate of diagnoses associated with serious impairment.

In terms of individual diagnoses, boys from homes headed by a widowed person in 1960 have a 76 per cent lower prevalence of serious neurotic symptoms at the Draft Board examination than do those from homes headed by a married couple and present no cases at all falling into the personality disorder and miscellaneous symptoms categories; only in the case of drug and/or alcohol related diagnoses do boys from homes headed by a widow have a higher than average prevalence of disorder.

In contrast to those who have suffered the death of a parent, boys from homes which, in 1960, were headed by a separated or divorced person have higher–than–average rates of psychiatric morbidity in each category of diagnosis and, overall, have a total prevalence rate for serious disorder which is 83 per cent higher than that of boys from homes headed by a married–and–cohabiting couple (and more than five times that of those from homes headed by a widowed person).

Boys from homes headed by a never–married person have a prevalence of disorder which, in general terms, is little different from that of the cohort as a whole, albeit with rather more instances of the miscellaneous category than expected and no cases relating to drug and/or alcohol abuse. The close connection in the 1950s and 1960s between having children and marriage means that the size of the never–married group (99 boys were living in homes headed by a never–married person in 1960) is something of a puzzle. The category is probably heterogeneous, containing some members of the cohort who are living with older siblings or other relatives and some who are living with one or other parent who, for a variety of reasons, has remained unmarried. Further analysis of the category would require data which is not available.

No clear pattern is apparent in the case of boys from homes in which data on parental marital status is missing; high prevalence rates are apparent for diagnoses associated with drug and/or alcohol dependency and for personality disorders but all other rates are below the level characteristic of the cohort as a whole and the overall prevalence rate is little different from that of the aggregate data.

PARENTAL MARITAL STATUS IN 1970

Considerable changes took place in the marital characteristics of the heads of the households in which members of the *Project Metropolitan* cohort lived between 1960 and 1970. Overall there is reduction in the proportion of the cohort living with married–and–cohabiting couples and an increase in the proportion living with widows and, especially, with the separated and divorced. The association between psychiatric diagnosis and parental marital status in 1970, when the cohort is aged 17 years, is shown in Table 3.

Young men from homes headed by a married–and–cohabiting couple in 1970 have an overall prevalence of serious disorder 14 per cent lower than that characteristic of the cohort as a whole; those from all other parental marital status categories have a higher rate than the aggregate.

The difference between the 1960 and 1970 data is most marked in the case of those from homes headed by a widowed person: boys from homes which were headed by a widow or widower in 1960 have a prevalence of serious disorder which is only one–third that of the cohort as a whole; boys from homes which were headed by a widowed person in 1970 have a prevalence of serious disorder which is almost 50 per cent higher than the aggregate figure. The greatest excess of diagnoses amongst those from widowed homes in 1970 is found in the personality disorder category, with a prevalence rate twice that of those from households headed by a married–and–cohabiting couple. No diagnoses in this category are recorded against those from 1960 homes headed by a widowed person. The excess of diagnoses amongst young men from homes headed by a widowed person in 1970, compared with those from homes headed by a married–and–cohabiting couple, ranges from 6 per cent in the case of drug and/or alcohol dependence (the only category in which the 1960 widowed group has an excess of diagnoses) to nearly 50 per cent in the case of neuroses and miscellaneous diagnoses.

There is greater consistency between the data for 1960 and 1970 in the case of members of the cohort living in households headed by a separated or divorced person. As in the case of the earlier material, the highest prevalence of disorder is found among those members of the cohort who in 1970 were living in homes headed by a separated or divorced person. Young men in this situation have prevalence rates for each diagnosis which are approximately 75 per cent higher than those found amongst those from homes headed by married–and–cohabiting couples. The increase in prevalence over those from homes headed by a married couple ranges from 63 per cent in the case of all diagnoses, to 67 per cent in that of serious neurotic symptoms and 77 per cent in that of any serious impairment.

TABLE 3: DRAFT BOARD DIAGNOSES BY MARITAL STATUS OF HEAD OF HOUSEHOLD, 1970.

A: RATE PER THOUSAND

Parental Marital Status	Neur	Serious Impairment P.Dis	Dr/Al	Misc	Any	Slight Impmnt	Any Impmnt	Population at risk
Married, cohab.	72	14	15	8	100	100	192	5635
Never-married	119	50	40	40	198	139	317	101
Widowed	105	28	15	12	149	102	241	323
Sep/Divorced	120	25	26	15	178	146	312	815
Other/md*	93	19	19	37	148	148	278	54
Total	80	17	16	10	114	106	211	6928

**Other/md includes 20 cohort members who are themselves heads of households in 1970*

B: RELATIVE RISK (base is household with a head who is married and cohabiting in 1970)

Parental Marital Status	Neur	Serious Impairment P.Dis	Dr/Al	Misc	Any	Slight Impmnt	Any Impmnt	Population at risk
Married, cohab.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	5635
Never-married	1.65	3.49	2.72	4.75	1.97	1.39	1.65	101
Widowed	1.46	1.96	1.06	1.48	1.48	1.02	1.26	323
Sep/Divorced	1.67	1.73	1.77	1.77	1.77	1.46	1.63	815
Other/md	1.29	1.30	1.27	4.44	1.47	1.48	1.45	54

Members of the cohort from homes in which the separated or divorced head of household is female have slightly higher rates of morbidity than those from homes headed by a separated or divorced male. Overall, the 11.8 per cent of the cohort living in homes headed by a separated or divorced person in 1970 contribute 18.4 per cent of the diagnoses of serious impairment at the Draft Board examination occurring between 1971 and 1973.

In a further contrast with the 1960 data, that for 1970 reveals a high prevalence of psychiatric morbidity amongst members of the cohort from homes headed by a never–married person. In many cases the head of household of boys in this category will be the same person as in the earlier data, in most cases being the boy's mother, but there will also be instances in which the cohort member has gone to live with an elder never–married sibling or other relative or with a friend. Especially high rates of disorder, more than twice the average, are found among those members of the cohort who, in 1970, are living in households headed by a never–married male. Young men from households with never–married heads have the highest prevalence of serious disorders of any of the parental marital status categories, slightly more than that found amongst those from homes headed by a separated or divorced person and almost twice that of boys from homes headed by a married–and–cohabiting couple. Particularly high prevalence rates are recorded among young men in this situation for personality disorders (50 per thousand) and for miscellaneous serious conditions (40 per thousand). The prevalence of serious neurotic symptoms, at 116 per thousand, is second only to that found amongst those from homes headed by a separated or divorced person (120 per thousand), and is more than 60 per cent higher than the figure recorded for young men from homes headed by a married and cohabiting couple.

The size of the "other and missing data" category is too small for meaningful analysis. Included in this group are the twenty members of the cohort, all unmarried, who appear as heads of household in their own right. Two of the young men in this category receive a diagnosis of severe impairment with neurotic symptoms (a rate of 100 per thousand) and one of drug or alcohol abuse.

The finding that boys from homes which at their birth, mid–childhood or middle adolescence, are headed by a married–and–cohabiting couple have a better psychiatric health record in late adolescence than boys from homes headed by someone with another marital status is hardly surprising. Less expected is the size of the difference in the apparent effects of widowhood and of divorce or separation and the variation in this difference between the years in which the cohort members were aged seven years and 17 years.

Most writers agree that the effects of bereavement in childhood are most pronounced when the children are young and the parent who dies is the mother. In *Attachment and Loss*, Bowlby (1973) suggests that the sudden severance of contact with a parent, especially the mother, in infancy interferes with the development of self–confidence and self–reliance. The importance of parental loss in infancy is a common assumption of psycho–analytic approaches to personality development and disorder. In a dissenting voice, however, Rutter (1971, 1981) suggests that depressive disorders during adult life may be particularly common when a parent has died during the person's adolescence.

Brown and Harris (1978: 240) emphasise the aetiological significance of the loss of the mother in early childhood for the later psychological health of women. Later loss, after, say, the age of eleven years, is believed to be of little significance:

> "...until a child is about eleven the main means of controlling the world is likely to be the mother. Thereafter the child is more likely to exert control directly and independently. The earlier the mother is lost, the more the child is likely to be set back in his or her learning of mastery of the environment ....loss of mother before eleven may well permanently lower a woman's feeling of mastery and self–esteem and hence act as a vulnerability factor".

The *Project Metropolitan* findings appear to be in direct conflict with this argument: boys living in homes headed by a widowed person during their early–to–mid childhood have a lower–than–average prevalence of psychiatric symptoms in late adolescence; boys from homes headed by a widowed person at the age of 17 years have a markedly higher prevalence of disorder.

No difference exists in the prevalence of disorder according to the gender of the widowed parent. Reflecting the higher death rate experienced by men, widows outnumber widowers among the parents of the cohort members by a factor of more than three–to–one in both 1960 and 1970, but the prevalence of psychiatric impairment among boys from the two types of background is almost identical. Neither the death of a mother or of a father in early childhood seems to have had deleterious effects on the later mental health of the *Project Metropolitan* boys; in later childhood, on the other hand, the death of either parent is a risk factor (albeit of considerably less importance than separation or divorce). There is no evidence to support a notion either that the death of a mother or of the same–sex parent has a greater effect.

Further analysis of the consequences of differences in parental marital status at different stages of child development requires attention to be paid to the nature of the changes which take place over time. Before attempting this task, however, one further aspect of family structure will be looked at briefly: the difference between two–parent and one–parent households.

2: FAMILY TYPE IN 1963: ONE–PARENT AND TWO–PARENT FAMILIES

Registration data for 1963, when the members of the *Project Metropolitan* cohort are aged ten years, enables a classification to be made according to whether the boy's family is headed by two adults or one adult. Nearly all the two adult families are composed of children and their cohabiting parents, the great majority of whom were married (to each other). Rather less than ten per cent of the cohort in 1963 were living in households headed by a single parent; in 91 per cent of these the single parent was female. Data is missing for less than 0.25 per cent of the cohort (17 individuals). It was during the early 1960s that the trend towards the development of non–married cohabitation began to accelerate in Sweden, but the generation of parents who reared the *Project Metropolitan* cohort behaved in what may be thought of as the traditional way, the norm of the two–parent, two–child family, in which the child's parents are married and living with each other, being strongly supported.

In both the popular and scientific literature, as well as in much social policy, it is commonly assumed that children from one–parent families are at a considerable disadvantage, the absence of two parents depriving the child of adult role models and intensifying the emotional and financial burdens which the child–parent relationship has to bear. Under these circumstances, it may be anticipated that children living in one–parent families at the age of ten years will tend to show higher rates of psychological disturbance than those from two–parent backgrounds.

Table 4 shows the extent to which family type in 1963 is associated with the prevalence of psychiatric impairment at the Draft Board examination eight–to–ten years later.

The data conform to expectation: boys from one–parent households in 1963 have a 56 per cent higher prevalence of serious psychiatric impairment at the Draft Board examination than do boys from two–parent families; for psychiatric diagnoses associated with slight impairment the excess prevalence is 24 per cent and for any diagnosis 39 per cent. The one–parent category, which contains 9.7 per cent of the cohort, contributes 14.4 per cent of those receiving a psychiatric diagnosis associated with serious impairment.

TABLE 4: DRAFT BOARD DIAGNOSES BY FAMILY TYPE, 1963.

A: RATE PER THOUSAND

Family Type	Serious Impairment				Slight Impmnt	Any Impmnt	Population at risk
	Neur	P.Dis	Dr/Al	Misc	Any		
2-parent	76	16	15	10	108	104	203	6238
1-parent	114	27	24	10	168	129	282	673
Other/md	*	*	*	*	*	*	*	17
Total	80	17	16	10	114	106	211	6928

B: RELATIVE RISK (base is household with two parents in 1963)

Family Type	Serious Impairment				Slight Impmnt	Any Impmnt	Population at risk
	Neur	P.Dis	Dr/Al	Misc	Any		
2=parent	1.00	1.00	1.00	1.00	1.00	1.00	1.00	6238
1-parent	1.50	1.72	1.56	1.06	1.56	1.24	1.39	673
Other/md	*	*	*	*	*	*	*	17

Among individual diagnoses the greatest increase in risk associated with living in a one–parent family is for personality disorders (72 per cent), followed by drug and/or alcohol dependence (56 per cent) and the neuroses (50 per cent). There is no difference in prevalence between the two–parent and one–parent families with regards to miscellaneous diagnoses and relatively little difference with regards to diagnoses associated with slight impairment.

On the basis of initial analysis, the *Project Metropolitan* data suggest that, whatever the explanation, the consequence of being brought up, during the 1960s, in mid–childhood in a one–parent family is a heightened risk of later psychiatric impairment. Discussing the development of alternative family structures, including the one–parent family, Hinde (1987: 48) comments "the fact remains that in Western society the two–parent family is the norm: children lacking such a family sooner or later demand an explanation of their circumstances."

3: CHANGES IN PARENTAL MARITAL STATUS

Comparison of the 1953 birth records with the 1960 and 1970 Census returns enables the marital status of the heads of the households containing members of the *Project Metropolitan* cohort to be compared over a 17 year period.

Rather more than two–thirds of the cohort were in households which were headed by a married and cohabiting couple at all three of the dates considered. It must be remembered that the fact that the head of household has the same marital status at each date does not necessarily mean that the same people are involved each time. In the case of married couples there could have been a death or divorce, followed by a remarriage; there could also have been the substitution of one couple by another. None of these occurrences is likely to be common, but some caution is nonetheless required in interpreting the figures.

Of those boys who were born to a married couple in 1953, seven per cent were registered as living with someone who was widowed, separated or divorced in 1960 and a further 11 per cent suffered a change in parental status between 1960 and 1970.

Reflecting the norms of the age, a relatively small number of the *Project Metropolitan* cohort, only eight per cent of those were born to non–married parents and less than one per cent of the entire cohort, stayed in households headed by a never–married person during the period 1953–1970. In a much larger number of cases, the heads of the households containing members of the cohort born to non–married mothers changed from the non–married state to the married and cohabiting state: of the 641 boys who were born to non–married mothers and for whom information is available throughout the period, over three–quarters were for at least some time registered as living with a married couple. Most of the changes in this group took place in the first period: two–thirds of those originally registered as having been born to unmarried parents in 1953 were living with a married couple at the time of the 1960 Census. A further seven per cent of those who were born to non–married parents in 1953 were registered as living with a married couple in 1970.

In the latter ten years of the period, a considerable number of marriages were dissolved. Of those born to married and cohabiting couples, five per cent were recorded as living in homes headed by a separated or divorced person in 1960 and eleven per cent in 1970. A further 1.4 and 4.6 per cent, respectively, were recorded as living in homes headed by a widowed person.

In the case of 215 boys, just over three per cent of the cohort, at least two changes in parental marital status took place: 68 boys who were born to a non–married mother were registered as living with a married couple in 1960, but with a separated or divorced head of household in 1970, while 16 were recorded as living in a household headed by a widowed person in 1970; 97 boys, born to a married couple, were registered as living in a home headed by a separated or divorced person in 1960, but by a married and cohabiting couple again in 1970; 25 boys born to a married and cohabiting couple in 1953 were living in households headed by a widowed person in 1960, but by a married and cohabiting couple again in 1970.

The belief that successful child–rearing is fostered by stable and lasting marriages is a traditional part of Western culture and has been bolstered not only by religious teachings but, more recently, by experts basing their claims to knowledge on "rational" social science. According to Popenoe (1988: 310):

> "Most experts would probably agree that the fundamental ingredients of effective child rearing are the infant's prolonged intimacy with a nurturing, psychologically mature person and the child's exposure through childhood to the continuing presence of one and preferably two adults who provide consistent love, understanding, stimulation, guidance and protection. The crucial elements here are stability of parenting, as indicated by the words "prolonged", "continuing", and "consistent", and the presence of love and intimacy."

Research on the implications of changes in the status and identity of parents have revealed a number of negative consequences, albeit greatly affected by such factors as the nature and quality of alternative care following the break–up, the social and emotional context in which the dissolution takes place and the gender of the child. There is, of course, a considerable overlap between analyses of changes in parental marital status and considerations of the effects of family dissolution, as indexed by widowhood, separation or divorce.

Most of the effects of family structure on childhood development take place through interpersonal relationships and indices of family structure such as the size of the household or whether there are one or two parents in the family serve essentially as proxy measures of underlying social and emotional relationships.

There appears to be little if any information available on the relationship between changes in the composition and marital status of family members and the psychological development of children in Sweden.

Given the overt concern of much Swedish social policy in the mid–to–late part of the twentieth century with issues to do with children and the family, Popenoe (1988: 314) makes the point "That a society so resolutely devoted to social welfare and the good life should overlook this issue is a source of puzzlement".

CONSISTENCY AND CHANGE IN PARENTAL MARITAL STATUS, 1953 – 1960.

Table 5 shows the prevalence of Draft Board diagnoses and the population at risk amongst members of the *Project Metropolitan* cohort, cross–classified by the marital status of their parents in 1953 and 1960.

Analysis of the individual data for 1953, the year of birth of the cohort, and for 1960, when they were aged seven years, has already indicated that experience of living in a household headed by someone other than a married–and-cohabiting couple is associated with an increased prevalence of psychiatric impairment in late adolescence. Differences in the degree of detail available for the two years make detailed comparisons difficult, but Table 5 suggests that while it remains true that living in a family headed by a married couple is associated with a lowered risk of psychiatric impairment in both years, it is generally the case that experience of any change in parental marital status is disturbing.

Members of the cohort from homes in which there was a change in parental marital status from married in 1953 to separated or divorced in 1960, have a prevalence of serious disorder, at 188 per thousand, which is almost double that of boys from homes which are headed by married and cohabiting couples at both dates. Boys from homes headed by a non–married (and, most frequently, a never–married) person in 1953 who in 1960 are in homes headed by a separated or divorced person have an even higher prevalence of serious disorder, 243 per thousand. In the majority of cases, boys in this category will have experienced two changes in parental figures or parental marital statuses in quick succession: from never–married to married and from married to separated or divorced.

Boys from homes headed by a non–married person in 1953, but a married and cohabiting couple in 1960, have a prevalence rate for serious disorder of 173 per thousand; those whose parents are married at both dates have a prevalence rate of 104 per thousand. An almost identical figure is found among those from homes headed by a non-married person in 1953 and a never–married person in 1960.

TABLE 5: DRAFT BOARD DIAGNOSES BY PARENTAL MARITAL STATUS IN 1953 AND 1960

Marital Status 1953		Parental Marital Status 1960											
		Serious Impairment						Any Impairment					
		Md	Sin	Wid	S/D	Oth	Total	Md	Sin	Wid	S/D	Other	Total
Married	(Rate)	104	*	46	188	112	108	200	*	138	309	177	204
	(n)	*5449*	*9*	*87*	*324*	*277*	*6146*						
Not-married		173	103	0	243	162	166	278	218	200	311	270	271
	(n)	*446*	*87*	*20*	*74*	*37*	*664*						
Other	(Rate)	58	*	*	*	150	93	174	*	*	*	325	237
	(n)	*69*	*3*	*1*	*5*	*40*	*118*						
Total	(Rate)	109	111	37	199	121	114	205	222	148	308	203	211
	(n)	*5964*	*99*	*108*	*403*	*354*	*6928*						

Using the 1953 classification, boys from families headed by a non–married person at both dates have a rate of 149 per thousand. On this basis, those boys whose parent(s) have the same marital status in 1953 and 1960 constitute 81 per cent of the cohort and contribute 75 per cent of serious diagnoses; those whose parent(s) exhibit a change in civil status constitute 12.5 per cent of the cohort and contribute 18 per cent of the diagnoses relating to serious impairment.

An exception to the increase in the risk of impairment with changes in parental marital status occurs in the case of the 87 boys from homes which were headed by a married and cohabiting couple in 1953 and by a widowed person in 1960. The prevalence of serious disorder among this group, 42 per thousand, is only two–fifths of that characteristic of the cohort as a whole. An even more extreme figure, zero, is characteristic of the twenty boys from homes headed by a non–married person in 1953 and by a widowed person in 1960. Boys in this latter category, do, however, have a relatively high rate of slight impairment, giving them a prevalence of any diagnosis which is similar to that in the aggregate data.

Consistency and change in parental marital status are not identical with consistency or change in the composition of the households concerned. The discrepancy between the two measures may be especially pronounced in the case of households headed by never–married or by separated or divorced persons. For the period 1953 – 1960 it is possible to examine consistency in household composition directly.

A detailed comparison of the adult members of *Project Metropolitan* households, reveals that in 81 per cent of the cases where the head of household is non–married in both 1953 and 1960 there was a change in household composition. Among those members of the cohort who were living with married and cohabiting couples at both dates, there was a change in the composition of the partners in less than five per cent of cases. Where there was a change in the marital status of the head of household, from married in 1953 to separated, divorced or widowed in 1960, there was also a change in the identity of the adult residents in 90 per cent of the records; conversely, where the change was from non–married to married, a change in identities took place in only 41 per cent of cases, couples living together and getting married after, rather than before, the birth of a child.

Analysis of the prevalence of Draft Board diagnoses according to continuity or change in the identity of the adults heading households containing members of the *Project Metropolitan* cohort, reveals a pattern which is effectively identical to that characteristic of the analysis based on stability or change in marital status.

The prevalence of serious psychiatric impairment among boys from homes in which change occurred is 165 per thousand; among those in which no change took place, the rate is 104 per thousand. Boys from families in which there was a change in the identity of the head of household and/or the cohabitee comprise 15 per cent of the cohort and contribute 22 per cent of all diagnoses of neurosis, 26 per cent of all those of serious drug and/or alcohol dependence and 22 per cent of all those who received a diagnosis of serious impairment at the Draft Board examination.

The high rates of change in the adult composition of those households headed by the separated or divorced indicate that stability of marital status may mean very different things in different contexts. Ideally, both forms of consistency would be taken into account in the analysis of the effects of changes in parental circumstances. Unfortunately, for reasons associated with the need to ensure confidentiality, it is not possible to carry the analysis of the identity of the head of household and/or his/her cohabitee forward through the 1960–70 period and further analysis of the effects of parental change has to be confined to the study of parental marital status.

CONSISTENCY AND CHANGE IN PARENTAL MARITAL STATUS, 1960 – 1970.

The extent of change in the marital status of cohort members' parents between 1960 and 1970 is of a similar order to that reported in the previous seven years, but differs considerably in character, reflecting the social changes relating to the development of alternative family structures which were beginning to diffuse through Swedish society and the evolution of the family cycle. In the earlier period there were approximately equal flows from the non–married to the married and from the married to the non–married statuses; between 1960 and 1970 the great majority of the flows were from the married to the unmarried categories. Approximately one–in-seven (13.6 per cent) of the cohort members experienced a change in the marital status of their parents between 1960 and 1970; in more than four–fifths of this number the change was from living in a family which was headed by a married–and–cohabiting couple in 1960 to one headed by someone of widowed or of separated or divorced status in 1970.

Table 6 shows the distribution of Draft Board diagnoses among members of the cohort according to the various combinations of parental marital status at the two dates.

As in the period between 1953 and 1960, the data suggest that the experience of any change is disturbing and associated with a raised prevalence of psychiatric impairment but that, in addition, in each year a higher rate of impairment is characteristic of boys coming from homes headed by a separated or divorced person rather than a married and cohabiting couple. Parental bereavement, associated with positive health outcomes in the earlier time period, now has negative consequences.

All those who have experience of parental separation or divorce have high rates of impairment, regardless of timing. Among boys in sizable cells of the table, the highest prevalence of serious impairment, 50 per cent higher than the aggregate figure for the cohort, is found among those whose parents have the same separated or divorced status in both years (188 per thousand), followed by those from homes headed by individuals who changed from married to separated or divorced status between 1960 and 1970 (176 per thousand) or vice-versa (180 per thousand). The experience of living in a home headed by a separated or divorced person has a deleterious effect whenever it occurs and regardless of what changes later take place in parental marital status.

TABLE 6: DRAFT BOARD DIAGNOSES BY PARENTAL MARITAL STATUS IN 1960 AND 1970

Marital Status 1960		Parental Marital Status 1970											
		Serious Impairment						Any Impairment					
		Md	Sin	Wid	S/D	Other	Total	Md	Sin	Wid	S/D	Other	Total
Married	(Rate)	99	250	167	176	139	198	192	450	265	307	278	205
	(n)	*5179*	*20*	*234*	*495*	*36*	*5964*						
Single	(Rate)	38	145	*	*	*	111	192	242	*	*	*	222
	(n)	*26*	*62*	*1*	*8*	*2*	*99*						
Widowed	(Rate)	34	*	45	*	*	37	69	*	121	*	*	148
	(n)	*29*	*4*	*66*	*9*	*0*	*108*						
Sep/Div	(Rate)	180	*	*	188	*	199	262	*	*	315	*	310
	(n)	*122*	*9*	*6*	*260*	*6*	*403*						
Other/md	(Rate)	104	*	*	186	*	119	176	*	*	326	*	203
	(n)	*279*	*6*	*16*	*43*	*10*	*354*						
Total	(Rate)	100	198	143	178	130	114	192	317	241	312	296	211
	(n)	*5635*	*101*	*323*	*815*	*54*	*6928*						

The effect of a loss of a parent through death is very different in the two time periods represented in the *Project Metropolitan* data. Among those members of the cohort from homes which were headed by a married and cohabiting person in 1960, but by a widow or widower in 1970, the prevalence of serious disorder, at 167 per thousand, is nearly fifty per cent higher than that characteristic of the cohort as a whole. In contrast, boys from homes headed by a widowed person at each of the two dates have a rate of serious disorder 60 per cent lower than the aggregate figure.

Boys from homes headed by a married–and–cohabiting couple in both years have a prevalence rate for diagnoses of severe impairment of 99 per thousand.

Marriages which take place between the time when cohort members are aged seven and 17 years have a positive effect on adolescent mental health in the case of those from homes which were previously headed by a single or by a widowed person, but, as already noted, a neutral or negative effect in the case of those from homes previously headed by someone of separated or divorced status.

Boys from homes where there has been no change in parental marital status between 1960 and 1970 constitute 81 per cent of the cohort and contribute 73 per cent of those receiving a diagnosis of severe impairment. Similar trends characterise the distribution of diagnoses associated with slight and with any impairment.

CONSISTENCY AND CHANGE IN PARENTAL MARITAL STATUS, 1953 –'60 –'70.

Consideration of change and consistency in parental marital status over the full 17 years between 1953 and 1970 reinforces the conclusions based on the analysis of the two separate time periods. Table 7, based on the 1953 classification of marital status, provides a simplified picture of the data.

Boys from households which are headed by a married and cohabiting couple at all three dates have a prevalence of serious impairment which is 50 per cent lower than that of the rest of the cohort, at 96 per thousand. Lower rates are found among the 56 boys born to married couples, but living in households headed by a widowed head in both 1960 and 1970 (54 per thousand), and among the small groups of boys born to married couples, living in households headed by a widowed person in 1960 and by a married couple in 1970 or born to non–married mothers, living with never–married parents in 1960 and with married parents in 1970. All other combinations of marital status at the three dates are associated with rates of impairment which are appreciably above the aggregate figure for the cohort.

Among those combinations of marital status with more than a handful of cases, the highest rates of severe impairment are found among boys who are living in 1970 homes headed by a separated or divorced person. The 68 members of the cohort falling into this category who have experienced the social and emotional upheaval of at least two changes in parental marital status, from non–married in 1953 to married in 1960 and to separated or divorced in 1970, have more than double the average prevalence of serious impairment (265 per thousand cf 114 per thousand) and more than two–and–a–half times that of boys from homes with married and cohabiting parents whose status remains the same at each of the three dates. An even higher prevalence of serious impairment is found among those who were born to non–married mothers and lived in households headed by a separated or divorced person (not necessarily, of course, the same person) in both 1960 and 1970. The third highest prevalence of serious disorder, 206 per thousand, rate is found among another group who have experienced at least two changes in parental marital status: from married in 1953 to separated or divorced in 1960 and back to married in 1970.

An exception to the association between two or more changes in parental marital status and a high prevalence of disorder is found amongst the 25 members of the cohort who were born to a married and cohabiting mother in 1953, were living in a household headed by a widowed person in 1960 and in a household headed by a married and cohabiting couple again in 1970.

TABLE 7: DRAFT BOARD DIAGNOSES BY PARENTAL MARITAL STATUS 1953–60 AND 1960–70.

	Parental Marital Status in 1960 Compared with 1970											
Marital	**Serious Impairment**						**Any Impairment**					
Status	Md	Md to	N-Md	N-Md	Other	Total	Md	Md to	N-Md	N-Md	Other	Total
1953-60	Both	N-md	Both	to Md			Both	N-Md	Both	to Md		
Married (Rate)	96	160			*	104	187	285			*	200
Both Years *(n)*	*4768*	*667*			*14*	*5449*						
Not-Marr'd(Rate)	150	258			*	173	254	360			*	278
to Married *(n)*	*354*	*89*			*3*	*446*						
Not-marr'd(Rate)			177	62	*	149			277	187	*	254
Both Years *(n)*			*130*	*48*	*3*	*181*						
Married to(Rate)			155	167	*	157			282	238	*	269
Not-Married*(n)*	*122*	*9*	*6*	*260*	*6*	*403*						
Other/md (Rate)	81	*	*	*	121	113	140	*	*	*	203	201
(n)	*59*	*11*	*6*	*3*	*355*	*432*						
Total (Rate)	99	173	164	136	132	114	192	295	283	169	228	211
(n)	*5179*	*767*	*427*	*177*	*378*	*6928*						

Md : Married Both Years; Md to N-Md: Married to Not-Married;
N-Md Both: Not-Married Both Years; N-Md to Md: Not-Married to Married

The prevalence rates for all diagnoses giving rise to some degree of impairment show a similar relationship to the various combinations of parental marital status to that revealed in the analysis of the more serious diagnoses.

Although the data generally support the notion that a stable background provides the best base for socialization, not all forms of consistency in parental marital status over time are associated with positive outcomes.

Consistency in parental marital status is most effective when combined with marriage or widowhood; when combined with separation or divorce it loses its positive effect. At the same time, not all changes in parental marital status are equally disruptive: the small group of boys living in homes which were headed by a non–married person in 1953 and 1960, but by a married and cohabiting couple in 1970, have a low rate of impairment. In many cases falling into this latter category, of course, the change in marital status will not have been accompanied by a change in the identity of the parental couple. Where the disruption involves separation or divorce, however, the more changes in parental marital status, the worse the prognosis.

Boys from homes which are headed by a separated or divorced person at each of the three dates have high rates of disorder. There is no evidence of any adjustment effect. It will be remembered that it was particularly in this group that the 1953 – 1960 analysis revealed a considerable mismatch between the apparent stability of relationships indicated by consistency in marital status and the identity of household members.

Despite the crudity of the measures used, the analysis of the implications of parental marital status and of changes in that status over time, clearly show that for children growing up in Stockholm during the middle years of the century, family disruption resulting from separation or divorce has a strongly detrimental effect whenever it occurs. Furthermore, the negative effect is not counteracted by later parental remarriage. The effects of parental loss resulting from bereavement are very different.

In direct conflict with the prevailing view, the Stockholm evidence provides no support for the assumption that bereavement in early childhood has a particularly deleterious effect. On the contrary, boys from homes in which parental bereavement occurs before they reach the age of seven years, have a better–than–average expectation of mental health in adolescence. The effect of bereavement in later childhood and the teenage years, on the other hand, is negative.

Overall, homes headed by a married couple in a stable relationship throughout the period during which the members of the cohort were growing up provided a better base for later mental health than any alternative arrangement. Family disruption involving separation or divorce had a severe effect whenever it took place; that involving the death of a parent had much greater effect when it took place in late childhood or early adolescence than in early childhood.

4: THE EFFECTS OF HOUSEHOLD SIZE

The number of people in a household is a further structural characteristic which may be expected to influence the nature of family interaction and thus of the socialization process.

The larger the size of a household, the greater the scope for potential inter-ference and the greater the necessity for curtailing the individual's behaviour to fit in with others. Conversely, in very small households, especially those composed of a child and one adult, there may be a lack of sufficient models for satisfactory socialization and the absence of brothers and sisters reduces the opportunities for peer–group companionship and for learning the values of cooperation and sharing in an informal environment. In these circumstances it may be expected that children growing up in either large or small households will be at greater risk of psychiatric impairment than children growing up in the normative four–person household, consisting of two parents and two children.

Table 8 shows the distribution of the *Project Metropolitan* cohort and of the Draft Board diagnoses according to the size of the household in which the cohort members were living in 1963, at the age of ten years.

The four–person modal category, which overwhelmingly consists of two parents and two children, accounts for 42 per cent of the cohort. The dominance of the two–child, two–parent is not simply a statistical artifact, nor is it an ephemeral characteristic of the *Project Metropolitan* mothers: a preference for the two–child family was still being expressed amongst all age categories of a sample of women born between 1936 and 1960 and interviewed in the early 1980s (Statistiska Centralbyrån 1984). Less than four per cent of the cohort lived in two–person households, with a single parent; 11 per cent lived in households containing six or more people.

Boys living in four–person household show the lowest prevalence of psychiatric disorder: the rate for any diagnosis is 189 per thousand. The increase in prevalence rates as compared with those in boys from the modal category ranges from 15 percent in the case of boys from three–person households to 27 per cent in the case of boys coming from six–or–more–person households.

Consistent with the argument concerning the possible advantages of the four-person household for child development, the relationship between prevalence rates and household size reveals a U–shaped pattern.

TABLE 8: DRAFT BOARD DIAGNOSES BY HOUSEHOLD SIZE, 1963.

A: RATE PER THOUSAND

Size of Household	SERIOUS IMPAIRMENT Neur	P.Dis	Dr/Al	Misc	Any	Slight Impmnt	Any Impmnt	Population at risk
2 persons	88	23	12	0	115	108	223	260
3 persons	83	17	15	9	115	114	217	1372
4 persons	78	13	13	10	105	95	189	2876
5 persons	82	17	18	9	116	116	225	1624
6 persons +	77	29	24	15	137	116	241	796
Total	80	17	16	10	114	106	211	6928

B: RELATIVE RISK (base is household containing four persons)

Size of Household	SERIOUS IMPAIRMENT Neur	P.Dis	Dr/Al	Misc	Any	Slight Impmnt	Any Impmnt	Population at risk
2 persons	1.14	1.84	0.87	0.00	1.10	1.14	1.18	260
3 persons	1.07	1.34	1.16	0.87	1.10	1.20	1.15	1372
4 persons	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2876
5 persons	1.06	1.33	1.40	0.92	1.11	1.23	1.19	1624
6 persons +	0.99	2.31	1.81	1.50	1.31	1.22	1.27	796

Diagnoses associated with serious impairment reveal a concentration of high rates in boys from the largest six–or–more–person households: 137 per thousand. Boys from four–person households have the the lowest rate: 105 per thousand. There is little differentiation in prevalence rates between the other categories of household size.

In terms of individual diagnostic syndromes within the serious impairment category, the picture is inconsistent. Boys from two–person households receive the highest rate of diagnoses for neurotic symptoms; boys from households containing six–or–more–persons have the lowest prevalence of neuroses. The differences in rates are, however, small.

The most marked U–shaped pattern occurs in the prevalence of personality disorders: boys from six–or–more-person households have more than double the rate of personality disorders found among boys from four-person households; boys from two–person households have almost twice the rate. In the case of the remaining diagnostic categories associated with serious impairment, there is a hint of a positive linear relationship between prevalence and household size. Among those receiving a diagnosis of drug and/or alcohol dependence the lowest rate is found in boys from two–person households and the highest in those from six–or–more–person households. Boys from the largest households also receive the highest rate of the miscellaneous category of diagnoses; boys from two–person households receive no diagnoses in this category.

5: INTERACTION EFFECTS BETWEEN FAMILY STRUCTURE VARIABLES

THE ASSOCIATION BETWEEN HOUSEHOLD SIZE AND PARENTAL MARITAL STATUS

Despite the difference in the dates at which the two variables are measured, there is a clear association between household size and parental marital status amongst cohort members. One third of the households headed by a single, separated, divorced or widowed adult in 1960 consist of only two people in 1963: the cohort member and a single parent; a further third have only three persons. In comparison, little more than one–sixth of the households headed by a married and cohabiting adult in 1960 have only three members in 1963, the married couple and a single child. Only 14 per cent of the households headed by a single, separated, divorced or widowed person in 1960 contain more than four persons; amongst those headed by a married and cohabiting couple the figure is 37 per cent.

Table 9 shows the distribution of the cohort and of Draft Board diagnoses according to a cross–classification of cohort members by parental marital status in 1960 and household size in 1963. In view of the numbers involved and the difference in dates for the two sets of structural measures, marital status is divided simply into married, cohabiting and non–married categories, the latter including never married, widowed, separated and divorced parents.

Among those diagnosed as suffering from severe psychiatric impairment in the Draft Board examination, there is a clear difference in the patterning of prevalence rates according to household size between boys from households headed by married and by non–married adults.

Among boys from households headed by a married couple in 1960, the distribution of severe diagnoses by household size shows a marked U–shape: the lowest rate, 99 per thousand, is found in boys from four–person households; the highest rate, 167 per thousand, occurs in those from two–person households, followed by those from six–or–more–person households (136 per thousand). There is little difference in rates between boys from four–person and from three–person households, providing little support for any "single child" effect (Blake 1981).

TABLE 9: DRAFT BOARD DIAGNOSES BY MARITAL STATUS OF HEAD OF HOUSEHOLD 1960 AND HOUSEHOLD SIZE 1963

Size of Household, 1963		1960 Marital Status: Serious Impairment Marr'd	Not-M'd	Other	Total	Slight Impairment Marr'd	Not-M'd	Other	Total
2-persons	(Rate)	167	116	*	115	286	221	*	223
	(n)	*42*	*199*	*19*	*260*				
3-persons	(Rate)	103	186	119	115	199	330	194	217
	(n)	*1111*	*194*	*67*	*1372*				
4-persons	(Rate)	99	167	150	105	185	242	220	189
	(n)	*2617*	*132*	*127*	*2876*				
5-persons	(Rate)	115	197	77	116	228	262	165	225
	(n)	*1472*	*61*	*91*	*1624*				
6-persons+	(Rate)	136	83	180	137	238	250	280	241
	(n)	*722*	*24*	*50*	*796*				
Total	(Rate)	109	156	121	114	205	266	203	211
	(n)	*5964*	*610*	*354*	*6928*				

The high rate of severe impairment among the small group of boys who come from homes which were headed by a married and cohabiting couple in 1960, but only had two members by 1963, supports the contention that the experience of family dissolution in middle childhood, between the ages of seven and ten years, has a long–lasting negative influence.

It is hard to discern a pattern in the relationship between the prevalence of severe impairment and household size among those members of the cohort who were living in households headed by a single, separated, divorced or widowed person in 1960. In households containing three to five members in 1963, the excess of severe diagnoses among those which were headed by a non–married and/or non-cohabiting person in 1960 households, compared with those which were headed by a married and cohabiting couple, is between 70 and 80 per cent. Boys from four–person households show a slightly lower prevalence of severe disorder than boys from either three– or five–person households, but the lowest rates of impairment in the case of those coming from homes headed by a non–married person are found in boys living in the two extreme categories of household size.

The 24 boys who come from households combining a non–married head in 1960 and six–or–more members in 1963 have a particularly low rate of serious impairment.

There is little to distinguish the distribution of all cases of psychiatric impairment among cohort members according to household size and parental marital status from that characteristic of those diagnosed with a severe impairment.

Among boys from homes which in 1960 were headed by a married and cohabiting couple, there is a clear U–shaped pattern of prevalence rates in relation to household size; among those from homes which were headed by a single, separated, widowed or divorced adult in 1960, there is little evidence of any pattern.

HOUSEHOLD SIZE AND CHANGE IN PARENTAL MARITAL STATUS

As already discussed, between 1953 and 1960 there was a considerable "shuffling" in the marital status of the adult heads of households in which the members of the *Project Metropolitan* cohort lived. At least one–in–eight of the cohort experienced change in parental marital status between the two dates, but the extent of change varied amongst households of differing sizes. At the same time, it may be anticipated that the stress accompanying a change in parental marital status will lead to different outcomes in households of differing sizes. In large households more peer support may be available to enable the child to come to terms with parental changes. On the other hand, it may be the case that, social welfare provision notwithstanding, larger households will be more at risk of economic difficulties in the case of family disruption.

As Table 10 shows, the changes in the marital status of the heads of households between 1953 and 1960 were not evenly spread between the various categories of household size.

Among boys living in households where there was a change in the status of the head of household from married and cohabiting in 1953 to single, separated, widowed or divorced in 1960, slightly more than one–quarter were living in two–person households in 1963 while just over one–third cent lived in three-person households. Not surprisingly, there were few boys, 27 and 14 respectively, who combined two–person households in 1963 with heads of households who were either married and cohabiting in both 1953 and 1960 or had moved from an unmarried 1953 status to a married one in 1960. It may be assumed that in the majority of these cases further changes took place between 1960 and 1963. Among the majority of boys who were living with parents who were married and cohabiting in both 1953 and 1960 (79 per cent of the entire cohort), 45 per cent lived in four–person homes in 1963, 37 per cent in homes with larger numbers of inhabitants and 18 per cent lived in three person homes (two adults plus the cohort member). Among boys living in households headed by someone whose marital status was non–married in both 1953 and 1960, 47 per cent were in two–person households, 23 per cent in three–person households and 30 per cent in households containing four or more members. More than 80 per cent of the households containing five–or–more–persons in 1963 were headed by adults whose status was married and cohabiting in both 1953 and 1960; 75 per cent of those living in two–person households in 1963 had heads of households who were either non–married in 1953 and 1960 (33 per cent) or had moved from the married and cohabiting status to the non–married one.

TABLE 10: DRAFT BOARD DIAGNOSES BY HOUSEHOLD SIZE IN 1963 AND PARENTAL MARITAL STATUS 1953–60.

Marital Status 1953-60		Number of Persons in Household 1963 — Serious Impairment						Any Impairment					
		2	3	4	5	6+	Total	2	3	4	5	6+	Total
Married	(R)	111	98	97	113	122	104	259	195	181	222	227	200
Both Years	*(n)*	*27*	*980*	*2426*	*1367*	*649*	*5449*						
Not-Marr'd	(R)	*	140	150	167	295	173	*	223	256	322	377	278
to Married	*(n)*	*14*	*121*	*160*	*90*	*61*	*446*						
Not-marr'd	(R)	129	220	135	*	*	149	235	341	216	*	*	254
Both Years	*(n)*	*85*	*41*	*37*	*13*	*5*	*181*						
Married to	(R)	99	185	183	213	*	157	207	318	258	255	*	269
Not-Married	*(n)*	*111*	*151*	*93*	*47*	*18*	*420*						
Other/md	(R)	87	127	125	65	159	113	174	228	200	159	254	201
	(n)	*23*	*79*	*160*	*107*	*63*	*432*						
Total	(Rate)	99	173	164	136	132	114	192	295	283	169	228	211
	(n)	*5179*	*767*	*427*	*177*	*378*	*6928*						

Md : Married Both Years; Md to N-Md: Married to Not-Married;
N-Md Both: Not-Married Both Years; N-Md to Md: Not-Married to Married

Analysis of the distribution of diagnoses across the various combinations of household size in 1963 and marital status in 1953 and 1960 reveals a complex pattern. The small numbers "at risk" in several of the cells counsel caution in interpretation, but certain general patterns can be discerned.

Boys whose parents are shown as married and cohabiting in both 1953 and 1960 have rates of severe impairment which exhibit a relatively clear U–shaped relationship with household size. Only those coming from the largest households, with six–or–more–persons in 1963, have a prevalence rate which is higher than the aggregate figure for the cohort. A similar, but more pronounced pattern is characteristic of those from households in which there was a change in marital status from not married to married: all household size categories in this group have prevalence rates which are higher than the aggregate figure, with boys from the largest homes showing a prevalence rate more than two–and–a–half times that of the cohort as a whole.

The small group who come from two–person households in which the change in marital status between 1953 and 1960 was from not married to married, have a rate which, although high (214 per thousand) is not perhaps as exceptional as might be anticipated given the likelihood that by 1963 there will have been at least a second change in the relationship of their parents.

The U–shaped pattern in the relationship between household size and the prevalence of severe impairment is not found among either those members of the cohort whose parent(s) have stayed in the non–married category in 1953 and 1960 or those whose parents have changed from a married and cohabiting to a non–married status.

Among the 181 boys from households in which the the head of household remained non–married in both 1953 and 1960, the highest prevalence of serious impairment characterises those from households containing three–persons in 1963; none of the five boys from the largest category of household with non-married parents at the two dates received a diagnosis of severe (or, indeed, any) impairment at the Draft Board examination; among those from two–person households in 1963 the prevalence rate is only 13 per cent higher than the aggregate figure for the cohort.

Among those boys experiencing a marital break–up, with parents who change status from married in 1953 to non–married in 1960, the highest prevalence of severe impairment is found in those living in five–person households in 1963 (213 per thousand) and the lowest in those in two–person households (99 per thousand).

The distribution of all signs of psychiatric impairment according to household size 1963 and marital status 1953–60 reveals a very similar pattern to that characteristic of the more severe diagnoses.

A U–shaped pattern is characteristic of the relationship between prevalence rates and household size among those who come from homes headed by someone whose marital status either stayed married and cohabiting in 1953 and 1960 or changed from not married to married; insofar as any semblance to a "U" is discernible in the patterning of prevalence rates by household size for boys from households in which the head of household either stayed not married in 1953 and 1960 or moved from being married to being non–married, it is inverted. The highest rates, more than 50 per cent above the aggregate figure for the cohort, are found in boys from large households headed by someone who changed their marital status between 1953 and 1960 and in those from three–person households whose head was single, separated, widowed or divorced in 1960.

Among those from homes in which there was a change in the marital status of the head of household between 1953 and 1960, only boys who were living in two–person households in 1963 in which the change in parental marital status was from married to non–married, show a prevalence rate which is below the cohort average.

The data combining marital status in 1953 and 1960 with household size in 1960, suggest that the effect of household size is greatly affected by other characteristics of the family. The U–shaped pattern which has been discerned in the overall relationship between psychiatric disorder in late adolescence and the experience of living in households of differing sizes during middle-childhood remains apparent among the children of couples who retain their married and cohabiting status as their children age between birth and seven years; the pattern disappears among those whose parents either stay non-married or change in status from married to non–married. The presence of brothers and sisters does not appear to help cohort members in the face of parental disruption.

HOUSEHOLD SIZE AND FAMILY TYPE IN 1963

Further light on the relationship between adolescent impairment and family background in middle childhood is provided by an examination of data on household size and family type in 1963, when members of the cohort were aged ten years. Family type is divided into two categories, depending on the number of adults present who are classified as parents. The two–parent category contains both married and cohabiting couples and a small number of non-married cohabitees. Table 11 shows the distribution of the population at risk and the Draft Board diagnoses by the cross–tabulation of household size and family type.

TABLE 11: DRAFT BOARD DIAGNOSES BY FAMILY TYPE AND HOUSEHOLD SIZE, 1963.

Size of H'hold		Family Type: Serious Impairment 2-parents	1-parent	Other	Total	Any Impairment 2-parents	1-parent	Other	Total
2-persons	(Rate)		116	*	115		225	*	223
	(n)		*258*	*2*	*260*				
3-persons	(Rate)	100	188	*	115	198	308	*	217
	(n)	*1134*	*234*	*4*	*1372*				
4-persons	(Rate)	101	198	*	105	186	276	*	189
	(n)	*2750*	*116*	*10*	*2876*				
5-persons	(Rate)	112	261	*	116	219	435	*	225
	(n)	*1577*	*46*	*1*	*1624*				
6-persons+	(Rate)	135	*		137	237	*	*	241
	(n)	*777*	*19*	*0*	*796*				
Total	(Rate)	108	168	*	114	203	282	*	211
	(n)	*6238*	*673*	*17*	*6928*				

Rather more than one–third of boys from homes headed by a single parent lived with no one other than that parent. In the case of a further third, the cohort member lived with the single parent and one other child. Less than ten per cent of the boys from one–parent homes come from families containing four or more children. Forty–four per cent of the boys from two–parent families come from four-person households, 18 per cent from households containing three persons and 38 per cent from households containing five or more persons.

The U–shaped pattern which has previously been noted as describing the relationship between the size of the household in which cohort members were living at the age of ten years and the prevalence of psychiatric impairment amongst them eight years later, breaks down when controls are introduced for type of family.

The distribution of diagnoses associated with severe impairment shows a linear relationship with household size among boys from two–parent homes and tends towards an inverted–U–shaped (unimodal) relationship with household size among those from homes with a single parent in 1963.

The lowest prevalence of serious impairment in boys from two–parent families is found in those from three– and four–person households (100 and 101 per thousand, respectively). Boys from households with six–or–more–persons have a rate one–third higher. All household size categories among those living in homes with a single parent show considerably higher rates than they do among those from homes including two parents. The difference is most marked in the case of four–person households: in this category, boys from homes with a single parent have a prevalence of serious impairment which is almost twice that of those from homes with two parents. The smallest difference in prevalence rates between the two types of family is found among those from the largest category of household, containing six–or–more–persons: the difference here between two–parent and one–parent households is 56 per cent. Boys from households with three or more members, headed by a single parent, constitute less than six per cent of the cohort, but contribute nearly 11 per cent of those diagnosed as suffering from severe psychiatric impairment. It is noteworthy that boys from two–person, one–parent households show a prevalence of serious disorder which is little different from the aggregate rate for the cohort as a whole and considerably less than that for any other household size category headed by one parent. This suggests that some compensation factor may be present in this combination.

Analysis of the distribution of all forms of psychiatric impairment amongst the various combinations of household size and family type reveals a similar pattern to that found in the case of serious disorder, but with a greater emphasis on a linear pattern. In the case of boys from two–parent homes, there is an essentially linear relationship between household size and the prevalence of impairment; rates are low among those from four–person and three–person households (186 and 198 per thousand respectively) and high among those from six–or–more–person households (237 per thousand). A similar pattern is found among boys from one–parent families: the highest rates, twice the aggregate figure, are found among those from the larger households: 435 per thousand in those from households with five persons and 421 per thousand in the small number from households with six–or–more–persons.

Analysis of the distribution of Draft Board diagnoses according to the combination of family type and household size suggests that the apparent U-shaped relationship between household size in middle childhood and the prevalence of psychiatric impairment in adolescence is an artifact.

Controlling for the presence of one or of two parents, the prevalence of impairment appears to be an essentially linear function of household size among those with two parents and to follow a somewhat inverted–U–shape in the case of those from homes with one parent. In any case, the effect of family type, as here defined, is considerably greater than is that of household size.

PARENTAL MARITAL STATUS AND HOUSEHOLD SIZE IN ONE-PARENT FAMILIES

Comparison of the 1960 Census data on parental marital status with the 1963 material on household size and family type enables further elucidation of the effects of the structural variables on the mental health of the cohort. Particular interest attaches to the interaction between household size and parental marital status in one–parent families. Table 12 provides the relevant information.

TABLE 12: DRAFT BOARD DIAGNOSES AMONG BOYS FROM ONE-PARENT FAMILIES IN 1963 BY HOUSEHOLD SIZE IN 1963 AND MARITAL STATUS OF HEAD OF HOUSEHOLD IN 1960

		Household Size									
Marital		**Serious Impairment**					**Slight Impairment**				
Status		2	3	4	5+	Total	2	3	4	5+	Total
Married	(R)	167	170	158	290	187	286	280	237	516	311
	(n)	*42*	*82*	*38*	*31*	*193*					
Single	(R)	57	*	*	*	113	151	*	*	*	211
	(n)	53	10	6	2	71					
Widowed	(R)	0	69	*	*	38	107	207	*	*	154
	(n)	*28*	*29*	*9*	*12*	*78*					
Sep/Divorc'd	(R)	172	219	241	*	202	284	343	296	*	318
	(n)	*116*	*105*	*54*	*17*	*292*					
Other/md	(R)	*	*	*	*	179	*	*	*	*	256
	(n)	*19*	*8*	*9*	*3*	*39*					
Total	(R)	118	188	198	231	168	225	308	276	431	282
	(n)	*258*	*234*	*116*	*65*	*673*					

Rather more than two–fifths of the 673 cohort members who were living in one–parent families in 1963, when they were aged ten years, came from households which three years earlier were headed by a separated or divorced person. A further fifth came from households which in 1960 were headed by either a never–married person or someone who had been widowed. In none of these categories is there evidence of any change in parental marital characteristics between the two dates.

In the case of 193 boys, however, there is a clear presumption of family disruption occurring between the two dates: in 1960 they are registered as living in families headed by a married and cohabiting couple, in 1963 they are registered as living in a single–parent family.

The majority of one–parent families are small, but there is a complex interaction between the distribution of household sizes and the various categories of parental marital status. In line with expectation, family sizes tend to be smallest amongst those from homes which are headed by someone who was either never–married in 1960 or separated or divorced. Three–quarters of the boys living with a never–married parent in 1960 were, three years later, living in households containing only two members, themselves and one adult. Less than a quarter of the boys from homes headed by a married and cohabiting couple in 1960, but with only one adult in 1963, were in two–person households at the later date. Forty per cent of the boys living in households which in 1960 were headed by a separated or divorced person were, in 1963, in two–person households; only six per cent were in households containing more than four persons. More than 15 per cent of those from homes which were headed by either a married and cohabiting couple or a widowed person in 1960 were in 1963 in one–parent households containing five or more members.

Small numbers in several of the cells of the table again counsel caution in attempting too detailed an interpretation of the prevalence of Draft Board diagnoses according to the combination of parental marital status and household size among members of the cohort from one–parent families, but certain general patterns stand out.

Within each category of household size, boys from homes which in 1960 were headed by a widowed person have consistently low rates of psychiatric impairment. The pattern is especially marked in the case of diagnoses associated with serious functional impairment. No diagnoses of serious impairment are found among the 28 boys from one–parent families in 1963 who were living with a widowed parent in 1960; among those from three-person households the rate of serious impairment is only one–third that found among boys from three–person, one–parent households as a whole.

Boys who, at the age of seven years, were living with a never–married person and were registered as living with a single parent three years later also have a relatively low rate of psychiatric disorder in the Draft Board examination. In the modal two–person category, the prevalence of serious impairment in boys from this group is half that characteristic of cohort members from two–person households as a whole.

Among boys living in one–parent families at the age of ten years who, three years earlier, were living in households headed by a separated or divorced person, the highest prevalence of serious disorder occurs among those from four–person households and the lowest among those from two–person households. Among those where a change takes place between 1960 and 1963, from living with a married and cohabiting couple to living with a single parent, the highest rate of disorder occurs among those from households containing five–or–more-persons and the lowest among those from four persons.

Boys from two–person one–parent homes, who do not have to share their parent's attention with siblings, appear to fare relatively well in the face of family disruption, but much of this effect is due to their relative over-representation among the children of the never–married and the contribution of those from backgrounds of parental bereavement. Among those from homes in which disruption is accompanied by early separation or divorce there is little evidence of any general effect of household size. Among members of the cohort in which family disruption occurs between 1960 and 1963, when they are aged seven and ten years respectively, the impact appears to be especially pronounced amongst those from the largest households, containing five or more members; in all other categories of household size there is little consistent variation. Overall, there is little consistency in the effects of household size.

Analysis of the joint effects of household size and parental marital status among boys from one–parent families lends further support to the proposition that both variations in household size and the distinction between one–parent and two-parent families are less important for determining the outcome of child rearing than the nature of the relationship between the parental couple.

Different types of one–parent family, reflecting differences in the process by which the family has been formed, are associated with markedly different outcomes, which, in general, appear to be little affected by variations in household size.

Boys from families which have suffered disruption due to the death of a parent in early childhood have a particularly good prognosis; boys from households disrupted by separation or divorce have a particularly poor prognosis, regardless of household size. Among those from two–person households, low prevalence rates characterise those from families headed by the never–married or the widowed; among those from the largest families, the prevalence of disorder is especially high only amongst those from homes in which is a change in family structure between 1960 and 1963.

6: MOTHER'S AGE

The median date of birth of the mothers of the cohort members is March 1925, giving a median age at the birth of the cohort member of 28 years. At the time of the birth of the cohort member, 18 per cent of the mothers of *Project Metropolitan* boys were aged under 20 years, a further 18 per cent were aged 20–24 years, 26 per cent were aged 25–29 years, 23 per cent were aged 30–34 years, 11 per cent were aged 35–39 years and rather less than 4 per cent were aged 40 years and older.

The age of the mother is not a structural variable in the same way as the size and make–up of a family. It may, nonetheless, be considered an important factor in determining the ecology of child–rearing and in guiding the course of child development. It has been suggested that both early motherhood, say in the teens, and late motherhood, say after the age of 40 years, are likely to be associated with an increased risk of problems arising during child rearing and it may therefore be anticipated that each will give rise to a heightened risk of developing psychiatric disorder in adolescence.

Considerable attention has been paid to the difficulties associated with teenage pregnancy and childbirth in contemporary Western societies. In comparison with women in their twenties and thirties, the adolescent mother is assumed to lack the experience and personal resources necessary to provide a supportive environment for child development. In addition to having to cope with the burdens of child–rearing at a time when their own educational, social and economic developmental needs are at a height, it has also been suggested (eg by Benedek 1974) that teenage mothers may have particular difficulties in establishing the harmonious and warm mother–child relationship which has been regarded as a major factor in the development of psychological health.

In the extreme, teenage child–bearing has been linked with actual child abuse. In a work with the evocative title, *The Pregnant Adolescent: Problems of Premature Parenthood*, Bolton (1980: 148) claims that "In essence, the environment of the adolescent parent and that of the parent at high risk for child maltreatment are virtually interchangeable."

A succinct statement of the general understanding concerning teenage motherhood in Western society is provided by Udry in a foreword to a report on an action program designed to its incidence and costs (Allen and Bender 1980):

> "Adolescent child–bearing has unfortunate consequences for everyone involved. It is unfortunate for the offspring, because they suffer from higher mortality and morbidity and generally experience restricted opportunities in life. It is unfortunate for the young parents, because it hobbles their futures. It is unfortunate for the whole society: the rest of us pick up much of the cost of rearing such children, and all of us suffer when children face adverse circumstances and do not reach their potential as contributors to society."

A rather different line of argument is advanced in the case of relatively old mothers, who have, in any case, received much less attention. In the period since the second world war, improvements in obstetrics and paediatrics have helped to reduce the excess mortality and morbidity affecting the offspring of mothers in their forties, although there was still a differential present at the time of birth of the *Project Metropolitan* cohort. In relation to social factors, attention has been focussed on the size of the age gap between mother and child, particularly as the child moves into adolescence. Martens (1982: 17) suggests that while the greater experience of the mother may be an advantage to the child in his early years, the age gap may become problematic in later childhood:

> "the older a parent at the child's birth, the greater the value difference and hence the greater the risk for conflicts in the daily interaction between the parent and the school–aged child. More specifically, the greater the age difference between the parent and the child, the more accentuated the social distance between the counterparts, *especially when the society around them is changing rapidly.*"
>
> (Italics in the original)

The oldest mothers of members of the *Project Metropolitan* cohort were born before the beginning of the First World War, during the period when Sweden was in the early stages of its late but rapid transformation from a relatively poor rural society into a wealthy urban one. Much of their childhood experience would have been gained during the period of the 1920's and 1930's, when Sweden, in common with other Western societies was greatly affected by economic and social dislocations. In contrast, the youngest mothers were born and grew up as the country was emerging from depression and entering the period of social and political change which was instituted during and after the period of the Second World War, when Sweden was in the forefront of welfare planning. Given the changes which occurred between 1910 and and the mid–1930's, there would appear to be a high probability of "generation" effects taking place between the various age groups of mothers.

TABLE 13: DRAFT BOARD DIAGNOSES BY AGE OF MOTHER AT BIRTH OF COHORT MEMBER

A. RATE PER THOUSAND

AGE OF MOTHER	SERIOUS IMPAIRMENT							Population at risk
	Neur	P.Dis	Dr/al	Misc	Any	Slight	Any	
Under 20	86	21	24	9	126	101	219	1319
20–24	75	22	24	6	120	106	218	1255
25–28	72	9	14	11	101	103	193	1804
30–34	80	20	13	11	110	117	217	1562
35–39	107	14	11	18	134	104	228	740
40+	51	12	12	4	71	110	169	254
Total	80	17	17	10	114	106	211	6928

B: RELATIVE RISK (BASE IS MOTHER AGED 25-29 YEARS)

AGE OF MOTHER	SERIOUS IMPAIRMENT							Population at risk
	Neur	P.Dis	Dr/al	Misc	Any	Slight	Any	
Under 20	1.19	2.18	1.70	0.82	1.25	0.98	1.13	1313
20–24	1.04	2.28	1.72	0.57	1.18	1.03	1.13	1255
25–28	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1804
30–34	1.11	2.11	0.92	0.98	1.09	1.14	1.13	1562
35–39	1.48	1.43	0.78	1.58	1.33	1.01	1.18	740
40+	0.71	1.25	0.85	0.36	0.70	1.07	0.88	254

In any case, the political, economic, social and cultural climate characteristic of the 1950s and 1960s, the period during which the members of the *Project Metropolitan* cohort were brought up, differed very greatly from that characteristic of any of the childhood periods of their mothers, whether this be in the 1910's, '20's, '30's or '40's. The rapidity and widespread nature of the social change occurring during the period when the members of the *Project Metropolitan* cohort were growing up, could be expected to exacerbate the social distance between cohort members and older mothers. To the extent that this gap interferes with the socialization process, it should mean that boys born to older mothers have a higher risk of developing psychological impairment than do those whose mothers are perhaps twenty years younger.

The prevalence of psychiatric impairment at the 1971–73 Draft Board examination according to the mother's age at the birth of the *Project Metropolitan* cohort in 1953 is shown in Table 13.

The data do not follow a simple pattern. While it is true that the prevalence of serious impairment is higher among the boys born to mothers in the two youngest age groups than it is among those whose mothers were aged 25–29 years, and that boys born to women aged 30–34 years and 35–39 years have successively higher rates, the lowest rate of all occurs in the case of those born to women in the oldest category, aged 40 years and over. Being born to a teenage mother is associated with a 25 per cent increase in the prevalence of serious psychiatric impairment in late adolescence in comparison with being born to a 25–29 year–old woman. Being born to a woman in her late thirties, is associated with a 33 per cent increase in prevalence. Being born to a woman in her forties is associated with a 30 per cent reduction in prevalence, compared with having a mother in her late twenties and a 52 per cent reduction in comparison with having a mother in her late thirties.

The pattern characteristic of any serious impairment is repeated when attention is focussed on those categorised as suffering from severe neurotic symptoms. The prevalence of these symptoms varies between 51 per thousand in boys born to mothers aged 40 years and older, 72 per thousand in those born to 25–29 year–olds, 86 per thousand in those born to teenagers and 107 per thousand in those whose mothers were aged 35–39 years. In the case of other diagnoses the pattern is confused. The highest prevalence rates for personality disorders or drug and/or alcohol dependence characterise boys born to mothers in the two lowest age categories; miscellaneous diagnoses are found most frequently among those whose mothers were in their late–thirties. There is little evidence of any patterning in the distribution of slight impairment, but the lowest prevalence occurs in the children of the youngest mothers.

7: THE INTERACTION BETWEEN MOTHER'S AGE AND MARITAL STATUS

Not surprisingly, the *Project Metropolitan* data shows a clear association between the age of the mothers of the cohort at the time of the latter's birth and their marital status. In each age category, births to married women far outnumber those to single, separated, widowed or divorced women, but the ratio of legitimate to illegitimate births ranges between 1 : 0.24 in the case of teenage mothers to 1 : 0.06 in the case of those aged 25 years and above. In 1953, more than one third of the women whose children were born illegitimate were aged under 20 years and over half were aged under 25 years. In comparison, one sixth of the married mothers were aged under 20 years and one third were aged under 25 years. Virtually all those for whom data on marital status is missing were aged under 20 years.

Table 14 shows the distribution of boys in the *Project Metropolitan* cohort and the prevalence of Draft Board diagnoses of severe or any psychiatric impairment according to the age and the marital status of mothers.

Within each age category, being born to a non–married (or married but not cohabiting) woman is associated with a considerable increase in the prevalence of adolescent disorder.

Compared with the rate among the children of married women, the increase in prevalence in boys born to single, separated or divorced mothers is 67 per cent in the case of those born to teenagers, 24 percent in that of those born to 20–24 year–olds, 60 per cent in those born to mothers aged 25–34 years, 12 per cent in those whose mothers were aged 35–39 years and 32 per cent in those whose mothers were aged 40 years or older.

Within the non–married category, the prevalence of serious psychiatric disorder is highest in those whose mothers were still in their teens in 1953 (193 per thousand) and is lowest in the small number whose mothers were aged 40 years and above (91 per thousand). The children of teenage mothers show a prevalence of serious impairment which is 68 per cent higher than the cohort as a whole; boys born to mothers aged 40 years and above have a rate which is 20 per cent lower than the aggregate figure. Between these two extremes there is little evidence of any obvious pattern. Boys born to women who were in their twenties have a prevalence of 153 per thousand, 39 per cent higher than the overall figure for the cohort, those born to women in their thirties have a prevalence of 164 per thousand, 44 per cent higher than the aggregate figure.

TABLE 14: DRAFT BOARD DIAGNOSES BY AGE AND MARITAL STATUS OF MOTHER AT BIRTH OF COHORT MEMBER

		Mother's Marital Status 1953							
		Serious Impairment				Any Impairment			
Age (yrs)		Marr'd	Not-M'd	Other	Total	Marr'd	Not-M'd	Other	Total
<20	(Rate)	115	192	96	126	195	310	235	219
	(no)	*969*	*229*	*115*	*1313*				
20–24	(Rate)	114	150	*	120	217	217	*	218
	(no)	*1073*	*180*	*2*	*1255*				
25–29	(Rate)	97	155		101	189	245		193
	(no)	*1694*	*110*	*0*	*1804*				
30–34	(Rate)	107	171		110	213	303		217
	(no)	*1486*	*76*	*0*	*1562*				
35–39	(Rate)	133	149	*	134	223	319	*	228
	(no)	*692*	*47*	*1*	*740*				
40+	(Rate)	69	91		71	164	227		169
	(no)	*232*	*22*	*0*	*254*				
Total	(Rate)	108	166	102	114	204	271	237	211
	(no)	*6146*	*664*	*118*	*6928*				

Among boys born to women who were both married and cohabiting at the time of the cohort member's birth, the lowest prevalence of serious impairment is, again, found in those whose mothers were aged 40 years and older (69 per thousand), followed by those whose mothers were aged 25–29 years (97 per thousand).

There is little difference in the rates for boys born to teenage mothers or to women aged 20–24 years (115 and 114 per thousand respectively), while the highest rate (133 per thousand) is found among those born to women aged 35–39 years. In comparison with the cohort as a whole, the relative prevalence of serious psychiatric impairment in boys born to married women aged 35–39 years is 17 per cent higher and that of boys born to married women aged 40 years and older 40 per cent lower.

Boys born to teenage mothers for whom data on marital status is missing have a markedly low prevalence of serious impairment. If it were the case that they should all be included in the non–married category, the combined prevalence rate of 160 per thousand would still be somewhat higher than that characteristic of boys born to non–married and/or non–cohabiting mothers aged in their twenties.

The prevalence of any symptoms of impairment shows a less pronounced pattern than that found for symptoms of serious disorder. The lowest prevalence is found in the case of those boys whose mothers were both married and cohabiting and aged 40 years or older (164 per thousand), followed by those whose mothers combine marriage and being aged 25–29 years. The highest prevalence is found among boys whose mothers were single, separated, widowed or divorced and were aged either in their thirties (319 per thousand for the 35–39 year–olds, 303 per thousand for the 30–34 year–olds) or in their teens (310 per thousand).

Within each age category, women who were single, separated, divorced or widowed at the time of their confinement, have sons who have a higher than average prevalence of psychiatric impairment. Among those members of the cohort born to women in the non–married category, the lowest prevalence for any psychiatric impairment is for those whose mothers were aged 20–24 years (217 per thousand). In this age group there is no distinction in prevalence between the sons of married or of non–married women. In all other age categories, the children of non–married and/or non–cohabiting women have a considerably increased prevalence of disorder, the increase in rates varying between 59 per cent in the case of the children of teenage mothers to 30 per cent in that of those born to women aged 25–29 years and 40 per cent in that of those born to women aged 30 years and above.

Among the children of women who were both married and cohabiting, the lowest prevalence of all forms of psychiatric impairment is found in those whose mothers were aged over 40 years (164 per thousand), 25–29 years (189 per thousand) or under twenty years (195 per thousand) at confinement.

Among boys born to married and cohabiting women, there is little evidence in the data to support the notion that being born to either a very young mother, in her teens, or to one who is in her forties, is associated with a significantly greater risk of impairment than being born to a woman in her twenties or early thirties.

Among those members of the cohort who receive psychiatric diagnoses associated with severe impairment at the Draft Board examination, there is limited support for the hypothesis that being born to a teenage mother is associated with a higher risk of impairment than being born to a mother aged in her mid–to–late twenties. The effect is more pronounced in the case of children of women who were single, separated, widowed or divorced at the time of their confinement than it is in that of those whose mothers were married and cohabiting.

If attention is widened to include consideration of all psychiatric diagnoses associated with impairment, however slight, the effect of mother's age on prevalence rates largely disappears among the children of married women. In neither case is there any evidence at all to support the notion that being born to a mother in her forties is associated with greater risk of impairment.

However great the changes which occurred between the Sweden of the 1910s and the Sweden of mid–century, the age–gap between the mothers who gave birth in their forties and the children they produced is not associated with an increased prevalence of psychiatric disorder.

The overall impression is that the marital status of mothers has a considerably greater effect on the mental health of their sons than does their age when giving birth.

PART II: THE INTERACTION BETWEEN FAMILY STRUCTURE AND SOCIAL CLASS

An association between low socio–economic status and a heightened risk of psychiatric disorder is one of the most well–established generalizations in psychiatric epidemiology. Although it had been claimed that Sweden might be an exception to the rule, earlier analysis of the *Project Metropolitan* cohort has shown that boys who grew up in mid–century Stockholm in a family headed by someone of low occupational status or in receipt of a low income have a considerably higher prevalence of psychiatric disorder than do those from more favoured backgrounds (Timms 1990).

Socio–economic status provides a framework for the distribution of rewards and opportunities and helps to determine the structure of social relationships. The extent to which variations in marital status, family type, size of family and age at birth are independent of socio–economic status or reflections of it, is an empirical question. The association between family structure and the prevalence of psychiatric disorder could be the result of the association each set of variables has with the underlying distribution of socio–economic status. To investigate the role of family structure further, it is necessary to take socio-economic status into account.

1: PARENTAL MARITAL STATUS AND HOUSEHOLD SOCIO–ECONOMIC STATUS AT BIRTH.

Analysis of birth records enables the parental marital status and household socio–economic position of over 97 per cent of the *Project Metropolitan* cohort to be determined. Not surprisingly, homes containing male members of the cohort which in 1953 were headed by a non–married and/or non–cohabiting adult were less likely to be categorised as upper middle class (3 per cent) than were those headed by a married–and–cohabiting couple (14 per cent) and more likely to be characterised as unskilled working class (27 per cent versus 19 per cent).

Table 15 shows the distribution of the cohort and of Draft Board diagnoses according to the marital status of the cohort member's mother at the time of his birth in 1953 and the socio–economic status of the head of the household into which he was born.

TABLE 15: DRAFT BOARD DIAGNOSES BY MOTHER'S MARITAL STATUS AND HOUSEHOLD SOCIO–ECONOMIC STATUS 1953.

Marital Status		Socio-economic Status of Head of Household 1953											
		Serious Impairment						Any Impairment					
		UM	LM	SW	UW	nc	Total	UM	LM	SW	UW	nc	Total
Married	(R)	67	103	109	148	*	108	155	196	211	243	*	204
	(n)	*878*	*2377*	*1721*	*1152*	*18*	*6146*						
Not-married	(R)	*	141	178	192	172	166	*	214	298	311	276	271
	(n)	*18*	*220*	*191*	*177*	*58*	*664*						
Other/md	(R)					102	102					237	237
	(n)	*0*	*0*	*0*	*0*	*118*	*118*						
Total	(R)	40	85	125	151	*	101	111	188	212	242	*	193
	(n)	*252*	*754*	*471*	*318*	*9*	*1804*						

UM: Upper Middle Class. LM: Lower Middle Class. SW: Skilled Working Class US: Unskilled Working Class. nc: Not Classified

Despite the gap of 18 years between the measurement of the independent and the dependent variables, both the marital status of the cohort member's mother and the socio–economic status of the household into which he was born are associated with systematic variations in the prevalence of psychiatric disorder.

Boys born to mothers who were single, separated or divorced have a 53 per cent higher prevalence of serious impairment than boys born to mothers who were married and cohabiting; boys born into households classified as belonging to the unskilled working class have a rate 128 per cent higher than those born into upper middle class families. The difference in prevalence rates between the married and the unmarried categories cannot, however, be explained away by noting the differential class composition of the two categories of family structure. Instead, each structural variable appears to exert an independent, additive effect.

In each socio–economic status category other than the upper middle (which only has 18 members in the non–married category), the prevalence of serious psychiatric impairment is appreciably higher among boys born to unmarried and/or non–cohabiting mothers than it is among those born to mothers who are married and cohabiting. The excess prevalence of serious diagnoses among the unmarried and/or non–cohabiting varies between 30 per cent, in the case of those born into unskilled working class households, and 63 per cent, in that of those born into skilled working class homes.

The highest prevalence rate for psychiatric diagnoses associated with severe impairment is found among boys born to non–married mothers classified as unskilled working class (192 per thousand); the lowest rate, 58 per thousand is found among the 18 boys born to unmarried upper middle class mothers, closely followed by those born to married–and–cohabiting upper middle class mothers (67 per thousand). The combination of low status on both dimensions is accompanied by a three–fold increase in risk when compared with the "best" combination of the two factors.

A similar pattern is found when attention is broadened to include any diagnosis of impairment. Again, the highest rate (311 per thousand) occurs in boys born to single, separated or divorced mothers in unskilled working class households; the lowest rate (155 per thousand) is found in those born to married–and-cohabiting mothers in upper middle class homes. Boys born to non--married mothers in households classified as being of unskilled working class status constitute 2.5 per cent of the cohort and contribute 4.3 per cent of all serious psychiatric diagnoses and 3.8 per cent of all those receiving any diagnosis of psychiatric impairment at the Draft Board examination.

As has been found in other analyses examining the relationship between psychiatric morbidity and social class (Timms 1990), high prevalence rates are found amongst those whose class position cannot be determined. Within this category there is little difference in prevalence rates between boys born to married or non–married mothers.

2: AGE OF MOTHER AND HOUSEHOLD SOCIO–ECONOMIC STATUS AT BIRTH OF COHORT MEMBER

There are few clear patterns in the relationship between the age of the mothers of the Project Metropolitan cohort at the birth of the cohort member and the socio–economic status of the household into which he is received (Table 16).

A relatively high proportion, 12 per cent, of the boys born to teenage mothers cannot be classified in terms of socio–economic status. This is presumably because they are born into households in which the mother is the head and she has no occupation which can be classified. Four–fifths of all the boys whose socio–economic status cannot be ascertained at birth were the children of teenage mothers. As the result of differences in educational and career patterns, a smaller number of upper middle class women than of women in other social strata give birth in their early twenties: 3.5 per cent of the boys born to 20–24 year old women belong to households which are classified as upper middle class whereas the percentage in the cohort as a whole is 12. Reflecting a general correlation between socio–economic status and delayed childbirth, the median ages of mothers giving birth to members of the *Project Metropolitan* cohort were just over 31 years in the case of those classified as upper middle class, just under 28 years in the case of those from lower middle class households, 27 years in that of those from skilled working class homes and 26.6 years in the case of those classified as unskilled working class.

Table 16 shows the prevalence of psychiatric diagnoses at the Draft Board examination in 1971–3 according to mothers' age and household socio- economic status at the time of the birth of the cohort member in 1953.

Among the boys born into upper middle class families, the range in the prevalence of serious impairment is from zero in the case of those born to mothers aged 40 years and older to 117 per thousand in that of those born to mothers aged 35–39 years. With the exception of this latter group, boys classified as belonging to upper middle class families have a prevalence of serious impairment well below the aggregate figure for the cohort in all categories of mother's age at confinement. For mothers below the age of 40 years there is a U–shaped pattern in the relationship between age and the prevalence of serious disorder. The prevalence of serious impairment in boys born to upper middle class teenage mothers is 77 per thousand, slightly less than two–thirds of the aggregate figure for the cohort; boys born to 25–29 year-old mothers in this status category have a rate of 40 per thousand, little more than one–third the aggregate figure.

TABLE 16: DRAFT BOARD DIAGNOSES BY AGE OF MOTHER AND HOUSEHOLD SOCIO–ECONOMIC STATUS 1953.

Age of Mother		Socio-economic Status of Head of Household 1963											
		Serious Impairment						Any Impairment					
		UM	LM	SW	UW	nc	Total	UM	LM	SW	UW	nc	Total
<20	(R)	77	131	131	146	116	126	161	188	228	273	252	219
	(n)	*143*	*442*	*320*	*253*	*155*	*1313*						
20–24	(R)	68	126	99	142	*	120	182	203	214	246	*	218
	(n)	*44*	*444*	*444*	*309*	*14*	*1255*						
25–29	(R)	40	85	125	151	*	101	111	188	212	242	*	193
	(n)	*252*	*754*	*471*	*318*	*9*	*1804*						
30–34	(R)	65	106	107	175	*	110	169	208	225	274	*	217
	(n)	*278*	*614*	*413*	*252*	*5*	*1562*						
35–39	(R)	117	121	136	168	*	134	221	226	227	237	*	228
	(n)	*154*	*248*	*198*	*131*	*9*	*740*						
40+	(R)	0	42	76	136	*	71	40	158	212	197	*	169
	(n)	*25*	*95*	*66*	*66*	*2*	*254*						
Total	(Rate)	67	107	116	153	129	114	157	198	220	252	253	211
	(n)	*896*	*2597*	*1912*	*1329*	*194*	*6928*						

UM: Upper Middle Class. LM: Lower Middle Class. SW: Skilled Working Class US: Unskilled Working Class. nc: Not Classified

The U–shaped pattern in the relationship between mother's age and prevalence rates is also characteristic of boys born to lower middle class mothers aged under 40 years. Boys born to women aged over 40 years of age are, again, an exception to the general pattern, with a prevalence rate, 42 per thousand, which is less than half that of the next lowest age category, mothers aged 25–29 years. Boys born to teenage mothers in the lower middle class category have a relatively high rate of impairment, 131 per thousand, 15 per cent above the aggregate figure.

There is a less regular pattern in the relationship between mother's age and the prevalence of severe impairment amongst boys born into skilled working class families. The lowest rate is found in those born to women in their forties, 76 per thousand, followed by those born to mothers aged 20–24 years. The children of teenage mothers in this socio–economic category have the same prevalence rate as those born to teenagers in the lower middle class category. The highest rate, 136 per thousand, is found in boys born to mothers aged 35–39 years.

Among boys from unskilled working class families, mother's age has relatively little effect on prevalence rates. Boys born to mothers of all ages in this socio-economic status category have rates which are higher than the cohort average. Boys born to women aged 40 years of age and over have the lowest rate, 136 per thousand; those born to mothers aged 30–34 years have the highest, 175 per thousand.

Small numbers make it problematic interpreting the relationship between prevalence rates and age of mother among those boys who were born into homes of unclassifiable status. Among the 80 per cent of the category who were born to teenage mothers, the prevalence of disorder is very similar to the aggregate figure for the cohort; of those born to teenage mothers, only boys born into the upper middle class have a lower rate.

Analysis of the distribution of all diagnoses does little to clarify the picture revealed in the case of those diagnoses associated with severe impairment. The relationship with age of mother tends to be less well–marked than in the case of severe impairment. Boys born to mothers aged 40 years and over still have prevalence rates which are less than those whose mothers were aged in their thirties, but the difference is less marked than it was in the case of severe disorder. Prevalence rates among boys born to teenage mothers are lower than those of boys born to 20–24 year–olds among the two middle class groups, but higher among the two working class categories.

The introduction of controls for socio–economic status suggests that age of mother is of very limited significance for the development of psychiatric morbidity in adolescence and that the overall relationship which appears to exist between morbidity and mother's age may be an artifact. Little support is given to the supposition that boys born to especially young and especially old mothers will be at particular risk.

The prevalence of psychiatric impairment amongst the children of teenage mothers tends to be higher than that characteristic of the cohort as a whole, but, when combined with high socio–economic status, is by no means exceptional. Contrary to initial expectations, boys born to mothers aged 40 years and over have the lowest rates of impairment in each socio–economic status group; boys born to mothers aged 35–39 years have one of the highest. The data contain no clue which might help unravel this puzzle.

3: MARITAL STATUS AND PARENTAL SOCIO-ECONOMIC STATUS IN MIDDLE CHILDHOOD

Considerable changes occur in both the marital characteristics and the socio-economic position of cohort members during the period between birth and the age of seven to ten years. Structural changes in employment and personal social mobility lead to a considerable increase in the number of middle class households and a corresponding decline in the number of households headed by someone classified as working class in 1963. There is little overall change in the number of parents falling into the married–and–cohabiting and non–married and/or non–cohabiting categories, but there is considerable movement between the two categories between 1953 and 1960.

Table 17 shows the distribution of the cohort by the 1960 marital status of their parents, the socio–economic status of the head of the household in which they were living in 1963 and the Draft Board diagnoses they received in 1971–3.

In comparison with the 1953 data, the differences in marital make–up between the socio–economic strata are less pronounced in 1960–63, although it remains the case that the non–married are considerably under–represented among the upper middle class. The percentage of the cohort living with a non–married and/or non–cohabiting parent found in households categorised as upper middle class is less than four, compared with eight per cent among those living in households categorised as unskilled working class. The concentration of women in occupations categorised as being of relatively low status is reflected in the difference in the socio–economic profile of households with married and with non–married heads. Of those living in households with a separated or divorced head, the great majority of whom are women, seven per cent are in households classified as upper middle class, 42 per cent lower middle class, 17 per cent skilled working class and 16 per cent unskilled working class. Among those from homes headed by a widowed person, the equivalent figures are nine per cent upper middle class, 40 per cent lower middle, 17 per cent skilled working class and eight per cent unskilled workers. Comparable figures for those in households headed by a married and cohabiting couple are 17 per cent upper middle class, 42 per cent lower middle class, 23 per cent skilled working class and 16 per cent unskilled working class. A relatively high proportion of those living with a non–married and/or non–cohabiting parent cannot be classified in terms of socio–economic status: this is true of 26 per cent of those living in households headed by a widowed person and 18 per cent of those in homes with a separated or divorced head.

TABLE 17: DRAFT BOARD DIAGNOSES BY PARENTAL MARITAL STATUS 1960 AND HOUSEHOLD SOCIO-ECONOMIC STATUS 1963.

Household SES 1963		Parental Marital Status 1960											
		Serious Impairment						Any Impairment					
		Md	Sin	Wid	S/D	Other	Total	Md	Sin	Wid	S/D	Other	Total
UM	(R)	65	*	*	179	62	67	145	*	*	214	154	146
	(n)	*1026*	*2*	*10*	*28*	*65*	*1131*						
LM	(R)	100	83	23	164	118	103	193	125	140	269	196	196
	(n)	*2522*	*48*	*43*	*171*	*153*	*2937*						
SW	(R)	120	*	*	224	131	123	221	*	*	284	230	227
	(n)	*1359*	*19*	*18*	*67*	*61*	*1524*						
UW	(R)	151	182	*	270	177	158	262	227	*	429	242	268
	(n)	*975*	*22*	*9*	*63*	*62*	*1131*						
nc	(R)	224	*	71	203	154	200	402	*	214	351	231	341
	(n)	*82*	*8*	*28*	*74*	*13*	*205*						
Total	(Rate)	109	111	37	199	121	114	205	222	148	308	203	211
	(n)	*5964*	*99*	*108*	*403*	*354*	*6928*						

UM: Upper Middle Class. LM: Lower Middle Class. SW: Skilled Working Class
US: Unskilled Working Class. nc: Not Classified
Md: Married, cohabiting. Sin: Single (never-married). Wid: Widowed.
S/D: Separated or Divorced. Other: includes missing data.

The prevalence of total diagnoses follows a relatively simple pattern: high rates are characteristic of boys from homes headed by a separated or divorced person and from homes of low socio–economic status; low rates are characteristic of boys from homes headed by widows and, to a lesser extent, those headed by married and cohabiting couples and from homes of high socio-economic status.

Boys from upper middle class homes which, in 1960, were headed by a married and cohabiting couple have a prevalence of any diagnosis of 145 per thousand, one–third lower than the aggregate figure for the cohort; boys from unskilled working class homes headed by a married and cohabiting couple have a rate which is 80 per cent higher than the high status group, 262 per thousand.

Within each socio–economic status category, other than that composed of those whose status could not be classified, boys from homes headed by a separated or divorced person have consistently higher prevalence rates than those from homes headed by someone of any other marital status. The highest rate of all, 429 per thousand, more than double the aggregate figure for the cohort, is found among the 63 boys from 1963 homes classified as lower working class which were headed by a separated or divorced person in 1960.

Family disruption which reflects separation or divorce in mid–childhood appears to act as an additive factor to the experience of low socio–economic status in determining the overall prevalence of psychiatric disorder: the lower the socio–economic status, the greater is the difference between prevalence rates among boys from homes headed by married and cohabiting and by separated or divorced persons respectively. Among those from upper middle class homes, boys from families headed by a separated or divorced person have a prevalence of all disorders 48 per cent greater than those from homes headed by a married couple, among those from unskilled working class backgrounds the difference between the two types of family is 64 per cent.

Small numbers make it difficult to discern much patterning in the distribution of prevalence rates among those from homes headed by a never–married person or by a widow or widower, but, in each case, rates are low, generally below those even of boys from homes headed by a married and cohabiting couple.

The relationship between prevalence rates and the two family background variables shows greater variation in the case of those diagnoses associated with severe impairment than in that of all diagnoses.

Among those members of the cohort who were living in upper middle class homes which, in 1960, were headed by a married and cohabiting couple, the prevalence of severe impairment, at 65 per thousand, is little more than half the figure for the rest of the cohort; among those from homes headed by a married couple classified as unskilled working class, the prevalence of serious psychiatric impairment is more than double this rate, at 151 per thousand.

Controlling for socio-economic status makes little difference to the association between parental marital status and the prevalence of severe impairment. Within each socio–economic status category, boys from homes headed by a separated or divorced person have a consistently higher prevalence of severe impairment than those from any other type of family. The greatest difference between those from married and from separated or divorced backgrounds characterises those from homes in the highest socio–economic status category: boys from upper middle class homes headed by a separated or divorced person have nearly three times the

prevalence rate found among those from homes headed by married and cohabiting couples; among those from unskilled working class homes, the difference is 79 per cent. Regardless of socio-economic status all those from families which during their middle–childhood were headed by a separated or divorced person have a prevalence of serious psychiatric disorder which is considerably higher than that of the cohort as a whole.

As in the case of overall impairment, small numbers make it difficult to analyse the prevalence of cases of severe impairment among those from homes headed by a widowed or by a never–married person. Only four diagnoses of serious impairment are made among the 108 boys from homes which in 1960 were headed by a widow or widower: one among the 43 from lower middle class households (giving a prevalence of 23 per thousand, one fifth the aggregate figure for the cohort), one among those from skilled working class backgrounds and two among the 28 from households of unclassifiable socio-economic status. There are no cases of severe impairment among the ten boys from upper middle class families or the nine from unskilled working class families headed by a widow or widower. The 99 members of the cohort who were living in homes headed by a never married person produce 11 diagnoses of serious impairment: of these four occur among the 48 boys from lower middle class homes, a rate of 83 per thousand, four among the 22 boys from unskilled working class backgrounds, a rate of 182 per thousand, and two among the 8 boys from families of unclassifiable socio–economic status.

With the exception of those from widowed families, high prevalence rates are characteristic of all members of the cohort coming from homes whose socio-economic status in 1963 could not be ascertained. Although the differences between the married, single and separated or divorced categories are relatively slight, the highest rates are found among boys from homes of unclassifiable socio–economic status which were headed by married and cohabiting couples. This presumably reflects a difference in the meaning of a failure to place male and female heads of households in the socio–economic hierarchy. Households headed by a married couple are nearly always classified according to the status of the male head: a failure to locate such a household in the stratification system is likely to reflect such factors as unemployment, ill–health, imprisonment and other unusual circumstances. In the case of households with children which are headed by a never–married, widowed, separated or divorced person, the great majority of whom are women, the failure to classify is principally a reflection of the difficulty of locating housewives in the stratification system. In these circumstances, it is not, perhaps, surprising that boys from unclassified households headed by a married couple have a greater prevalence of disturbance than those from households headed by a single parent.

The introduction of socio–economic status as a control does nothing to reduce the effect of differences in parental marital status in mid–childhood on the later mental health of the *Project Metropolitan* cohort. In particular, the negative implications of family disruption during childhood resulting in separation or divorce and the apparently positive impact of parental bereavement receive further confirmation. Among those members of the cohort living either with a married and cohabiting couple or with a never–married person, presumably, in most cases, someone who has "voluntarily" chosen that status, a high prevalence of disorder is only found among those from homes which fall at the bottom of the socio–economic status hierarchy. The combination of low socio-economic status and the experience of parental separation or divorce is especially problematic.

4: MARITAL STATUS AND PARENTAL INCOME IN MIDDLE–CHILDHOOD

Analysis of the relationship between the prevalence of psychiatric impairment at the Draft Board examination and marital status in 1960, taking account of the recorded income of the heads of households in 1963, provides a another perspective on the interaction between marital and socio–economic status as it affects the development of disorder.

As in the case of the relationship between marital status and the occupational dimension of socio–economic status, there is a clear association in the *Project Metropolitan* data between marital status and the income dimension of socio-economic status. The relevant data is shown in Table 18.

TABLE 18: DRAFT BOARD DIAGNOSES BY PARENTAL MARITAL STATUS 1960 AND INCOME OF HEAD OF HOUSEHOLD 1963.

		Parental Marital Status 1960											
H'hold Head		**Serious Impairment**						**Any Impairment**					
Income 1963 (SEK)		Md	Sin	Wid	S/D	Other	Total	Md	Sin	Wid	S/D	Other	Total
33000+	(R)	73	*	*	167	118	76	149	*	*	208	235	152
	(n)	*1327*	*3*	*11*	*24*	*51*	*1416*						
18–33000	(R)	108	83	74	160	121	109	209	167	185	284	200	210
	(n)		*3163*	*24*	*27*	*81*	*140*	*3435*					
<18000	(R)	160	105	17	222	98	159	269	246	138	317	176	267
	(n)	*1066*	*57*	*58*	*221*	*51*	*1453*						
No Record	(R)	100	*	*	182	134	119	196	*	*	338	205	218
	(n)	*408*	*15*	*12*	*77*	*112*	*624*						
Total	(Rate)	109	111	37	199	121	114	205	222	148	308	203	211
	(n)	*5964*	*99*	*108*	*403*	*354*	*6928*						

Md: Married, cohabiting. Sin: Single (never-married). Wid: Widowed. S/D: Separated or Divorced. Other: includes missing data.

Fifty–five per cent of those living in households headed by someone who was separated or divorced in 1960 and 54 per cent of those living in households headed by a widowed person, were, in 1963, living in households in which the income of the head of the household was recorded as less than 18,000 kronor.

The under 18,000 kronor category contains less than 19 per cent of those living in homes headed by a married and cohabiting couple. At the opposite end of the income scale, an annual head of household income of more than 33,000 kronor in 1963 was characteristic of 22 per cent of those from households headed by a married and cohabiting couple in 1960, six per cent of those from homes with a separated or divorced head and ten per cent of those from homes with a widowed head.

No income is recorded or income data is missing for nine per cent of the cohort: in 18 per cent of these information is also missing on marital status. The "no recorded income" category contains 19 per cent of those from households headed by a separated or divorced person in 1960, but less than seven per cent of those from homes headed by a married and cohabiting couple.

It should be noted that the income data does not include several sources of payment, such as welfare benefits and alimony, which may be particularly important in the case of families with several children and/or headed by a non-married person. Universal child benefits were introduced in Sweden in 1948 and by the early 1950s were being paid on a basis which was calculated at the time as representing almost one–third of the minimum cost of meeting the living needs of the child (Nelson 1953, quoted in Popenoe 1988). Families in higher income brackets received the same amount per child as did those in the lowest, but no child deduction was allowed against income tax. Other welfare payments which are not subject to income tax, such as payments to widows and alimony, are also excluded from the income record.

The lowest prevalence of any psychiatric impairment, 138 per thousand, is found among the 58 boys who in 1960 were living in homes headed by a widowed person and in 1963 were in households where the head of household had an income of less than 18,000 kronor. Boys from homes which were headed by a married and cohabiting couple in 1960 and had a head–of–household income of more than 33,000 kronor in 1963 have a similarly low rate of disorder: 149 per thousand, two–thirds of that in the rest of the cohort.

Among those for whom income data is known, the highest prevalence rate, 317 per thousand, is found among the 221 boys who come from homes which combine incomes in the under–18,000 kronor range with a separated or divorced head. Boys from homes headed by a separated or divorced person for whom income data is not available have an even higher prevalence rate: 338 per thousand. Boys from households which in 1960 were headed by someone of never-married status have overall rates of psychiatric impairment which are similar to, but slightly less, than those found amongst those from homes with married and cohabiting heads.

The picture is similar in the case of diagnoses associated with severe impairment. The lowest prevalence of disorder is, again, found among boys from 1960 homes headed by a widowed person who in 1963 were in homes headed by someone with a recorded income of less than 18,000 kronor: 17 per thousand, one–seventh of the rate for the cohort as a whole. Boys from homes headed by a widow or widower in the middle income category, with a head of household income of between 18,000 and 33,000 kronor in 1963 have a rate of 74 per thousand. Boys from households headed by someone of never–married status also have low rates of impairment: 83 per thousand in the case of those from homes with a head of household income of between 18,000 and 33,000 kronor and 105 per thousand in the case of those from households where the recorded income of the head is under 18,000 kronor. Boys from households with a married and cohabiting head in 1960 and a head of household income of more than 33,000 kronor in 1963 have a rate of serious psychiatric impairment which is approximately two–thirds that of the cohort as a whole and less than twice that found among boys from the lowest income group.

The highest rate of disorder, 222 per thousand, almost twice the aggregate figure, is found among the 221 boys from homes which were headed by a separated or divorced person in 1960 and had a head of household income of less than 18,000 kronor in 1963.

In each income category, the highest prevalence of serious impairment occurs among those from homes headed by a separated or divorced person and the lowest among those from homes headed by someone who has been widowed.

The difference in the prevalence of severe psychiatric impairment between boys from married and from separated or divorced backgrounds is most pronounced in the case of those from the wealthiest households and from those with no stated income and least pronounced in that of those from households whose heads have stated incomes of less than 18,000 kronor. Even in this latter case, however, boys from households headed by someone who is separated or divorced have a prevalence of disorder nearly 40 per cent higher than that of boys from homes with a married and cohabiting head.

There is little obvious patterning in the distribution of prevalence rates among boys from homes with heads whose marital status is not known or otherwise not classifiable: the highest prevalence of severe impairment among those from homes in which the head of household's marital status is unknown occurs in the case of the 112 boys from homes in which the head of household has no recorded income; the lowest rate occurs among those with a recorded income of less than 18,000 kronor.

Within each income category, boys who were at the age of seven years living in households headed by a separated or divorced person have a consistently higher prevalence of Draft Board diagnoses than do those from households headed by someone with any other marital status. The difference in the prevalence of disorder according to parental marital status and, in particular, the excess of disorder among those whose parents have separated or divorced by the time their children have reached the age of seven years, is not an artifact of income distribution. At the same time, amongst those from homes with married and cohabiting heads and, to a lesser extent, those from homes with never–married heads, the rate of disorder increases as the head of household's income decreases. There is no such tendency among those from homes headed by a widowed person. It may be speculated that the amount of non–income support provided to widowed parents makes up for any financial hardship they might otherwise suffer, but the low prevalence of psychiatric disorder among boys who, in middle childhood were living in low–income homes which were headed by a widowed person is a striking finding.

Confidence in the interpretation of the relationship between the prevalence of psychiatric disorder among the members of the *Project Metropolitan* cohort and the marital and socio–economic status of their parents when the boys were in mid–childhood is somewhat weakened by the difference in the timing of the status measures. To investigate the relationship between family structure and socio–economic further, recourse can be had to the 1963 data on family type, extracted from the same Population Register as the income and occupational material.

5: FAMILY TYPE AND PARENTAL SOCIO-ECONOMIC STATUS IN MIDDLE CHILDHOOD

As already noted, the location of women — and of households headed by women — in the socio-economic status hierarchy is problematic. This is especially true when the placing is dependent on an analysis of occupations. It is more than likely than both the status and life-style implications of occupational categories differ between men and women. Caution is required when trying to compare the implications of occupationally-based measures of socio-economic status when they are applied indiscriminately to men and women. An indication of the difficulties which may arise is given by comparing the occupational distribution of the heads of two-parent and one-parent households in which members of the *Project Metropolitan* cohort were living in 1963. Table 19 contains the relevant information.

The great majority of one-parent households (614 out of 673) were headed by a woman: over 40 per cent of the heads are classified as lower middle class, mainly routine-grade workers in office and shops, while five per cent are classified as upper middle class. In a further 27 per cent of one-parent households, no occupation is given for the head of household, or, if it is, it is unclassifiable (eg housewife). In the case of two-parent families, in which socio-economic status is generally measured in terms of the male head of household, 43 per cent are classified as lower middle class, 18 per cent are categorized as upper middle class and occupational information is missing or unclassifiable in only 0.3 per cent.

The patterning of prevalence rates for both any diagnosis and of diagnoses categorized as serious is clear. Although the analysis of the association between psychiatric impairment and family type has shown that there is considerable variation in the nature of the relationship according to the marital status of the parents concerned, the relationship between family type, income and disorder is relatively straightforward: the highest rates are found in boys from one-parent families classified as unskilled working class; the lowest rates are found in boys from two-parent families classified as upper middle class. The range in the prevalence of diagnoses of any impairment is from 143 per thousand, in boys from two-parent upper middle class families, to 379 per thousand in boys from one-parent unskilled working class families, a difference of 165 per cent.

TABLE 19: DIAGNOSES BY FAMILY TYPE AND SOCIO-ECONOMIC STATUS, 1963.

		Family Type 1963							
		Serious Impairment				Any Impairment			
SES		2-Parent	1-Parent	Other	Total	2-Parent	1-Parent	Other	Total
UM	(R)	64	176	*	67	143	235	*	146
	(n)	*1096*	*34*	*1*	*1131*				
LM	(R)	100	137	*	103	192	236	*	196
	(n)	*2662*	*271*	*4*	*2937*				
SkW	(R)	125	112	*	123	229	214	*	227
	(n)	*1419*	*98*	*7*	*1524*				
UnW	(R)	148	264	*	158	257	379	*	268
	(n)	*1040*	*87*	*4*	*1131*				
nc	(R)	238	197	*	200	286	350	*	341
	(n)	*21*	*183*	*1*	*205*				
Total	(R)	108	168	*	114	203	282	*	211
	(n)	*6238*	*673*	*17*	*6928*				

UM: Upper Middle Class. LM: Lower Middle Class. SkW: Skilled Working Class. UnW: Unskilled Working Class. nc: not classified.

With one exception, that of boys from households classified as skilled working class, members of the cohort from one–parent families have considerably higher rates of impairment than those from two–parent families in each of the occupational strata. The excess of cases among those from one–parent families ranges from 23 per cent among boys from households classified as lower middle class to 47 per cent among those from unskilled working class backgrounds and 63 per cent among those categorized as upper middle class.

Among those members of the cohort for whom a socio–economic status category is not assignable, boys from one–parent families have a prevalence of disorder 22 per cent higher than those from two–parent families.

Among boys from one–parent families, none of the socio–economic status categories has a prevalence rate which is less than the average figure for the cohort, but the main distinction is in terms of the high rates found among those for whom occupational data is either unavailable or unclassifiable and those from unskilled working class backgrounds. In boys from two–parent families there is a regular increase in the extent of impairment as socio–economic status declines.

The distribution of diagnoses of serious impairment is essentially similar to that of any diagnosis. Boys from two–parent, upper–middle class families have the lowest rate, 64 per thousand, little more than half the aggregate figure for the cohort; boys from one–parent, unskilled working class backgrounds have the highest rate, 264 per thousand, more than four times the lowest and more than twice the aggregate figure. As in the case of all diagnoses, those from skilled working class households provide an exception to the finding that in each socio–economic status category, those from one–parent families exhibit a higher prevalence of impairment than those from two–parent families. The difference between the two family types is most extreme in the case of boys from upper middle class backgrounds, amongst whom those from one–parent households have a prevalence of serious disorder almost three times that of those from two–parent families. In contrast to the situation in the case of any diagnoses, among those for whom occupational data on the head of household is missing or unclassifiable, there is a slight preponderance of serious impairment among the small number of boys from two–parent families.

Among members of the cohort from one–parent families in 1963, there is little regularity in the relationship between the prevalence of serious psychiatric impairment and socio–economic status; the highest rate is found among those with the lowest status, followed by those whose status is unclassifiable, but after that the relationship becomes positive: amongst those from households classified as upper or lower middle class or skilled working class, boys from higher status homes have higher prevalence rates than those from lower. Among boys from two–parent families, on the other hand, there is a regular and negative relationship between the prevalence of serious disorder and socio– economic status.

In general, the data indicate that the experience of both low socio–economic status and coming from a one–parent family in middle–childhood is associated with an increase in the risk of developing psychiatric disorder in late adolescence. A background in middle–childhood which combines high socio-economic status and a two–parent family provides considerable protection against the development of psychiatric disorder. Perhaps reflecting the heterogeneity already known to exist within the family types, the relationship between the two risk factors is not, however, sufficiently regular to justify a simple additive model.

6: FAMILY TYPE AND HOUSEHOLD INCOME IN MIDDLE–CHILDHOOD

In an attempt to seek further clarification of the relationship between family structure, income and morbidity, a further analysis can be undertaken looking at the effects of income differences on the prevalence of psychiatric disorder in boys from two–parent and one–parent families.

The relationship between the income of the head of the household and type of family is even closer than is that between family type and occupational status. As can be seen from Table 20, almost two–thirds of the one–parent families containing members of the *Project Metropolitan* cohort in 1963 had heads of household with a recorded income of less than 18,000 kronor, compared with one sixth of the two–parent families. In a further 21 per cent of one–parent families, and eight per cent of those from two–parent homes, information on the income of the head of household is either unavailable or a nil figure was recorded. To a large extent, living in a one–parent family is synonymous with having a low income (but not *vice–versa*).

Among the boys from one–parent backgrounds, the concentration of cases in the low income category makes pattern recognition difficult, but the Table, which shows the distribution of Draft Board diagnoses by family type and household income, provides only weak evidence of a regular association between the prevalence of impairment and family type within the various income categories.

The highest rate for any symptom, 324 per thousand, 54 per cent higher than the aggregate figure, is found among boys from one–parent families in the no recorded income category. The lowest rate of impairment among boys from one–parent families is found among the 21 who come from the households in which the head has the highest recorded income, more than 33,000 kronor, but the variation with income is relatively modest.

Within each income category, boys from one–parent homes have a higher rate of disorder than boys from two–parent homes, but the difference is negligible in the case of the modal under–18,000 kronor group. Among boys from two-parent backgrounds, there is a clear trend for the prevalence of impairment to increase as income falls. The net effect of the two patterns is that in higher income groups, coming from a one–parent rather than a two–parent family is associated with an increase in the prevalence of psychiatric disorder, but in the lowest income group type of family makes no appreciable difference.

TABLE 20: DIAGNOSES BY FAMILY TYPE AND INCOME OF HEAD OF HOUSEHOLD 1963.

		Family Type 1963							
INCOME		SERIOUS IMPAIRMENT				ANY IMPAIRMENT			
(SEK)		2-Parent	1-Parent	Other	Total	2-Parent	1-Parent	Other	Total
>33000	(R)	75	143		76	151	238		152
	(n)	*1395*	*21*	*0*	*1131*				
18–33000	(R)	107	181	*	109	208	277	*	210
	(n)	*3334*	*94*	*7*	*3435*				
<18000	(R)	159	157	*	159	266	272	*	267
	(n)	*1032*	*415*	*4*	*1451*				
No Record	(R)	96	193	*	118	184	324	*	217
	(n)	*477*	*143*	*6*	*626*				
Total	(R)	108	168	*	114	203	282	*	211
	(n)	*6238*	*673*	*17*	*6928*				

The ratio of the prevalence rates for any symptom of impairment among boys from one-parent families to those from two–parent families is 1.58 : 1 among those from households with heads earning more than 33,000 kronor in 1963, 1.33 : 1 among those from households with heads with incomes in the 18,000 – 33,000 kronor range, 1.02 : 1 among those in the under 18,000 kronor group and 1.76 : 1 among those in the no income/missing data category.

A similar pattern to that revealed in the distribution of all degrees of impairment is repeated when attention is focussed on the diagnoses of serious impairment.

There is no evidence of any relationship between family type and the prevalence of serious disorders among boys from households with heads who had a stated income of less than 18,000 kronor. In all other income groups, however, boys from one–parent homes have a appreciably higher rate of serious disorder than do those from two–parent backgrounds. The highest rate of severe impairment occurs among the boys from one–parent households falling into the no income/ missing data category, 193 per thousand, 70 per cent higher than the aggregate figure, followed by the 94 boys from one–parent families with heads returning

earnings of between 18,000 and 33,000 kronor. Boys in the modal income category for those from one–parent families, with heads with a recorded annual income of under 18,000 kronor in 1963, have a prevalence rate of serious disorder which is less than that for the one–parent category as a whole and is, indeed, very slightly less than that recorded by boys from two-parent families in the same income category. The rate is, however, 38 per cent higher than the aggregate figure for the entire cohort.

The ratio of the prevalence rates for serious impairment among boys from one-parent families compared with those from two–parent families is 1.91 : 1 among those from households with heads earning more than 33,000 kronor in 1963, 1.69 : 1 among those from households with heads with incomes in the 18,000 – 33,000 kronor range, 0.99 : 1 among those in the under 18,000 kronor group and 2.01 : 1 among those in the no income/missing data category.

Among boys from two–parent families, there is a regular increase in the prevalence of serious impairment with declining income, apart from the no income/missing data group. The lowest rate, 75 per thousand, 35 per cent below the cohort aggregate figure, is found among those from two–parent families with heads in the highest income category; the highest rate, 159 per thousand, 40 per cent higher than the aggregate figure, is found among boys from households with heads reporting incomes of less than 18,000 kronor.

Coming from either a low income family or from a one–parent family is associated with a heightened risk of serious impairment, but the two risk factors are not additive.

Given that the experience of low income in middle–childhood and an upbringing in an one–parent family both appear to be conducive to a greater risk of psychiatric morbidity in later adolescence, it seems surprising that the combination of the two risk elements does not produce a considerably greater effect than does either by itself. One consideration which may ameliorate the joint effect is the difference between the various forms of one–parent family, in particular the difference between those headed by a separated or divorced person and those headed by a widow or widower. The high rate of disorder among those from households which in 1960 were headed by a separated or divorced person, combined with the exceptionally low rate of disorder among those from households headed by someone who is widowed, produce an overall figure for the prevalence of disorder among one–parent families which may be considerably misleading.

The evidence suggests that the distinction between two–parent and one–parent families is less important than that between families which have suffered disruption as the result of separation or divorce and those in which marriages are either intact, have never been entered into or in which family disruption during childhood has been the result of the death of a parent. The emotional climate of the two types of one–parent household, the nature and extent of support provided by others and the meaning of the events surrounding the formation of the family are all likely to differ significantly between the two types of household and cast into question the sociological utility of the concept of the one–parent family.

7: PARENTAL MARITAL STATUS AND INCOME IN ONE–PARENT FAMILIES

To investigate the interaction between marital status, income and family type further, it is possible to analyse the relationship between the income of the heads of the households in which cohort members in one–parent families were living in 1963 and the prevalence of psychiatric morbidity in the Draft Board record, taking account of the data on parental marital status in 1960. Table 21 gives the relevant information.

TABLE 21: DRAFT BOARD DIAGNOSES BY PARENTAL MARITAL STATUS 1960 AND INCOME OF HEAD OF HOUSEHOLD 1963 IN ONE-PARENT FAMILIES

		Parental Marital Status 1960											
H'hold Head		**Serious Impairment**						**Any Impairment**					
Income 1963 (SEK)		Md	Sin	Wid	S/D	Other	Total	Md	Sin	Wid	S/D	Other	Total
>18000	(R)	265	*	*	234	*	219	353	*	*	319	*	298
	(n)	*34*	*11*	*16*	*47*	*6*	*114*						
<18000	(R)	158	60	20	202	*	146	281	160	157	309	*	261
	(n)	*114*	*50*	*51*	*178*	*17*	*410*						
No Record	(R)	214	*	*	182	*	188	333	*	*	348	*	315
	(n)	*45*	*10*	*11*	*67*	*16*	*149*						
Total	(Rate)	187	113	38	202	179	168	311	211	154	318	256	282
	(n)	*193*	*71*	*78*	*292*	*39*	*673*						

Md: Married, cohabiting. Sin: Single (never-married). Wid: Widowed. S/D: Separated or Divorced. Other: includes missing data.

There are few differences in the income distribution of the heads of households among boys from homes with parents of different marital status. The percentage of boys from one–parent families with parental incomes of 18,000 kronor or more in 1963 varies between 15, among those living with a never-married head three years earlier, and 21 among those from homes with a widowed head. Among those from families headed by a separated or divorced person in 1960 the percentage in households where the head of household had an income of more than 18,000 kronor in 1963 was 16.

In the group which suffer some form of family dissolution between 1960 and 1963, changing from living in households headed by a married and cohabiting couple in 1960 to a one–parent situation in 1963, the percentage in homes with an income of more than 18,000 kronor is 18. Incomes of less than 18,000 kronor are recorded in the case of 70 per cent of boys living with a never–married parent, 65 per cent of those from homes with a widowed head, 61 per cent of those from homes headed by a separated or divorced person and 59 per cent of those from homes which had had a married and cohabiting head in 1960.

Among sizable groups, the highest prevalence of serious disorder, 265 per thousand, two–and–one–third times the aggregate figure for the cohort, is found among the 34 boys from one–parent homes in 1963 with incomes of greater than 18,000 kronor who were living in homes headed by a married and cohabiting couple in 1960; the next highest rate, 234 per thousand, characterises those from high income homes who had had a separated or divorced head in 1960.

The lowest rate, 20 per thousand, is found among the 51 boys from one–parent homes with recorded incomes of less than 18,000 kronor who came from families with a widowed head.

In each marital status category, the lowest prevalence rates of serious disorder among boys from one–parent homes occur among those with the lowest recorded incomes, generally followed by those from homes with no recorded income. It is tempting to speculate that this might have something to do with the likelihood that higher incomes require greater time to be spent out of the home.

Within each income category, boys from one–parent homes in 1963 who had lived in families headed by a widowed person in 1960 have morbidity rates which are consistently lower than those from any other background. There are in total only three diagnoses of severe impairment among the 78 boys living in one–parent homes in 1963 who were in families headed by a widowed person in 1960, making the calculation of prevalence rates a somewhat nominal exercise. In comparison with boys from one–parent families in aggregate, those from homes headed by a widowed person in 1960 have approximately one–fifth the prevalence of serious disorder; among those in the lowest recorded income category the proportion falls to one–seventh. In none of the income categories do boys from one–parent homes who have experienced the death of a parent during early–to–mid childhood have rates of impairment which are as high as the aggregate figure for the cohort. The only other category of boys among those from one parent homes who have a prevalence of serious disorder appreciably lower than that of the cohort as a whole are the 50 members of the cohort from households with recorded incomes of less than 18,000 kronor in 1963 who lived in households headed by a never–married person three years earlier.

Among the *Project Metropolitan* boys, early loss of a parent through death may have been distressing, but seems to have provided a remarkably good basis for later psychiatric health, even in the face of low income; loss of a parent through separation or divorce, on the other hand, is accompanied by a considerable increase in the risk of psychiatric impairment ten years on. The differences in the prevalence of disorder among the various categories of one–parent family, taking income into account, lend further weight to the proposition that what is important in terms of later psychiatric health is not the presence or absence of one or other parent, by itself, but, rather the circumstances surrounding the loss and the relationships which ensue. Discussions of the assumed effect of bringing up children in a one–parent family must, if possible, specify the process which has led to the family's formation.

8: HOUSEHOLD SIZE AND PARENTAL SOCIO-ECONOMIC STATUS IN MID-CHILDHOOD

The concentration of female heads of households in lower middle class occupations is reflected in the fact that more than half the two-person households in 1963 which contain members of the *Project Metropolitan* cohort fall into the lower middle class category (Table 22). Only five per cent of boys from two-person households have a parent who is classified as upper middle class; the percentage of upper middle class parents among boys from other household sizes ranges from 11 in the case of those from three-person households, 17 in that of those from four-person and from six-or-more-person households and 22 in that of those from five-person households. Fifteen per cent of the the boys from two-person households have a head of household who falls into the unclassifiable category of socio-economic status, mainly because the quoted female occupation of housewife cannot be placed in the conventional stratification hierarchy. Among boys from other household sizes, the percentage having parents whose occupational status cannot be classified is five in the case of those from three-person households and no more than two per cent among those from households containing four or more members.

TABLE 22: DRAFT BOARD DIAGNOSES BY HOUSEHOLD SIZE AND SOCIO-ECONOMIC STATUS 1963

		Household Size 1963											
H'hold		Serious Impairment						Any Impairment					
SES		2	3	4	5	6+	Total	2	3	4	5	6+	Total
U.Middle	(R)	*	60	63	71	72	67	*	166	130	153	145	146
	(n)	*13*	*151*	*476*	*353*	*138*	*1131*						
L.Middle	(R)	113	96	100	107	118	103	1691	195	180	213	232	196
	(n)	*141*	*574*	*1308*	*625*	*289*	*2937*						
Sk.Worker	(R)	135	109	116	134	157	123	243	218	210	256	245	227
	(n)	*37*	*330*	*639*	*359*	*159*	*1524*						
Uns.W'ker	(R)	69	177	145	154	182	158	241	272	248	278	297	268
	(n)	*29*	*243*	*408*	*259*	*192*	*1131*						
nc	(R)	125	203	156	321	*	200	275	311	267	536	*	341
	(n)	*40*	*74*	*45*	*28*	*18*	*205*						
Total	(Rate)	115	115	105	116	137	114	223	217	189	225	241	211
	(n)	*260*	*1372*	*2876*	*1624*	*796*	*6928*						

Among boys with upper middle class parents in 1963, only the small number from two–person households have a prevalence rate for serious impairment which is higher than the aggregate figure for the cohort. Apart from this group, there is a slight tendency for serious impairment to increase in prevalence with increasing household size, from 60 per thousand in boys from three–person households to 72 per thousand in those from six–or–more–person households.

The prevalence of serious impairment among boys from two–person, lower middle class homes is very similar to that of the aggregate figure; in the case of other household sizes, boys from lower middle class homes repeat the pattern of those from upper middle class backgrounds: as household size increases from three–persons to six–or–more–persons, the prevalence of serious impairment increases from 95 per thousand to 118 per thousand.

Boys from skilled working class homes reveal an essentially identical pattern to that in the two higher status groups, albeit at a somewhat raised level. Boys from two–person, skilled working class homes have a serious impairment rate of 135 per thousand; those from three–person households have a rate of 109 per thousand. The rate then increases along with an increase in household size, reaching 157 per thousand among boys from households containing six–or– more persons.

The pattern which characterises the two middle class and skilled working class categories is broken in the case of boys from homes headed by someone characterised as unskilled working class. In this category, boys from two-person households have by far the lowest rate, 69 per thousand. Boys from all other household size categories exhibit rates which are considerably higher than the average figure, ranging from 145 per thousand in those from four–person households to 177 per thousand in those from three–person households and 182 per thousand, 60 per cent more than the aggregate figure, in those from households of six or more.

Among those members of the cohort who live in households which cannot be classified in terms of socio–economic status, the lowest rate, 125 per thousand, occurs in those from two–person households and the highest rates occur among the relatively small number of boys living in households containing five– or six–or–more–persons, 321 per thousand and 278 per thousand respectively. The prevalence of diagnoses of serious impairment among boys from three-person households of unclassifiable socio–economic status is 203 per thousand.

Analysis of the distribution of all diagnoses of impairment by socio–economic status and household size reveals a pattern which is less consistent than that based on serious impairment alone.

In general, prevalence rates increase with increasing household size and decreasing socio–economic status, but there are several exceptions to the trend. Boys coming from two–person households have higher than average prevalence rates in all except the modal lower middle class category. In all socio–economic status categories, prevalence rates are higher in boys from three–person households than they are among boys from four–person households; in all except boys from the upper middle class category, prevalence rates among those from five– and six–or–more–person households are higher still, being more than the cohort average in all except the upper middle class group. More than half the boys from five– or six–or–more-person households whose head is of unclassifiable socio–economic status receive a diagnosis associated with at least some degree of impairment at the Draft Board examination, two–and–a–half times the average figure.

Two–person households appear to be something of an anomaly; elsewhere the data on household size and socio–economic status suggest that each is related to the patterning of psychiatric morbidity. Living in households which are categorised as being of low or, especially, unclassifiable, socio–economic status or in households which are larger than the four–person norm (and, less certainly, smaller than the norm) at the age of ten years increases the risk of being diagnosed as suffering from psychiatric impairment in late adolescence.

9: HOUSEHOLD SIZE AND PARENTAL INCOME IN MID–CHILDHOOD

Differences in household size are likely to interact with parental income. Not surprisingly, as Table 23 shows, the great majority of two–person households housing members of the *Project Metropolitan* cohort, have heads with recorded incomes in the lowest income category, less than 18,000 kronor in 1963. Two-thirds of the boys coming from homes which consist of two persons, themselves and one adult, are from families in which the head has an annual income of less than 18,000 kronor; a further 13 per cent have no income recorded. Less than four per cent of the boys from two–person homes have heads of household earning more than 33,000 kronor. In all other categories of household size there is a much more even spread of incomes, the percentage falling into the lowest income category ranging between 16 among boys from four– and five-person households, 22 in those from six–or–more–person households and 28 among those from three–person households. The proportion of the cohort coming from homes with a parental income of more than 33,000 kronor, ranges from 12 per cent in the case of those from three–person households to 22 per cent among those from four– and from six–or–more–person households and 27 per cent among those from five–person households.

TABLE 23: DRAFT BOARD DIAGNOSES BY HOUSEHOLD SIZE AND INCOME OF HEAD OF HOUSEHOLD 1963

		Household Size 1963											
Head's		**Serious Impairment**						**Any Impairment**					
Income (SEK)		2	3	4	5	6+	Total	2	3	4	5	6+	Total
>33000	(R)	*	65	70	78	104	76	*	176	130	156	191	152
	(n)	*9*	*170*	*629*	*435*	*173*	*1416*						
18–33000	(R)	130	104	107	116	109	109	217	191	206	231	212	210
	(n)	*46*	*681*	*1539*	*801*	*368*	*3435*						
<18000	(R)	130	158	150	174	213	159	222	279	228	302	337	267
	(n)	*37*	*330*	*639*	*359*	*159*	*1524*						
No Record	(R)	176	116	89	130	169	119	235	245	162	243	234	218
	(n)	*34*	*155*	*235*	*123*	*77*	*624*						
Total	(Rate)	115	115	105	116	137	114	223	217	189	225	241	211
	(n)	*260*	*1372*	*2876*	*1624*	*796*	*6928*						

There is a complex patterning of Draft Board diagnoses according to household size and income.

Among boys from homes in which the reported income of the head of household is more than 33,000 kronor, the prevalence of severe impairment exhibits a tendency to increase with increasing household size, but all categories have a rate which is less than that characteristic of the cohort as a whole. There is little variation in the prevalence of serious impairment among boys from high income homes with between three and five members. The prevalence of serious impairment in each of these categories is less than two-thirds of the aggregate figure, but there is a sudden increase in prevalence among those from households containing six–or–more members, to a rate only some ten per cent less than that characteristic of the cohort as a whole.

There is little evidence of any clear relationship between household size and the prevalence of severe psychiatric impairment among boys from households with heads in the middle income category, with recorded incomes of between 18,000 and 33,000 kronor. The highest rate, 130 per thousand, is found among those who come from middle–income, two–person homes; the lowest rate, 104 per thousand, is found among those from three–person households. Only among those from two–person and from five–person households is the prevalence of serious disorder greater than in the cohort as a whole.

Among boys from the lowest income category, from households with heads reporting a 1963 income of between 18,000 and 33,000 kronor, there is, again, a tendency for the prevalence of serious impairment to increase with increasing size of household, with boys from households containing six–or–more persons having a particularly poor record. Boys from all household size categories in this income band, other than that containing two–person households, have prevalence rates for serious disorder which are higher than the cohort aggregate. The highest rate, 213 per thousand, almost double the aggregate figure for the cohort, occurs among the 178 boys from six–or–more–person households; the lowest rate, 105 per thousand, is found among those from two–person households.

It is only in the case of boys from families which report no income in 1963 that the U–shaped association between household size and the prevalence of serious disorder reappears. In this category, the lowest prevalence rate, 89 per thousand, is found among boys from households falling into the modal four–person category. Boys from all other household size categories have prevalence rates which are above the aggregate figure, ranging from 116 per thousand in the case of those from three–person households, to 169 per thousand among those from households with six–or–more–persons and 176 per thousand among those from two–person households.

As is generally the case, the prevalence rates for any symptom of impairment show less regular patterns than do those for the diagnoses associated with serious impairment alone. The patterns do not, however, depart radically from those described for serious disorder.

In members of the cohort from households in the highest income category, the lowest rate for all diagnoses (disregarding the three symptom–free boys living in two–person homes) is found among boys from four–person households, 130 per thousand, and the highest, 191 per thousand, among those from households with six–or–more members. This latter rate is 20 per cent below the aggregate figure. The relatively high rate, 176 per thousand, found among boys from high–income three–person households is a reminder of the U–shaped pattern previously discussed, but otherwise there is a tendency for prevalence rates to increase along with household size.

Boys from the different household size categories within the middle–income group have rates for all disorder which hover around the cohort average. In only one of the household size categories, that for households containing five persons, do boys from households with heads reporting incomes between 18,000 and 33,000 kronor, show a prevalence of all disorder which, at 231 per thousand, is clearly higher than the aggregate figure. As in the case of serious impairment, the lowest prevalence of any diagnosis in the middle–income group occurs among boys from three–person households: 191 per thousand.

The highest prevalence for any symptoms of impairment among boys from households in the under–18,000 kronor income category, is found in those coming from six–or–more–persons, 337 per thousand, 60 per cent more than the cohort average. The lowest rates are found in boys from two–person and from four–person households, 222 and 228 per thousand, respectively. Any suggestion of a simple monotonic relationship between household size and impairment in the lowest income group is confounded by the relatively high rate found among the 366 boys in the group who come from three–person households.

Among boys from households with heads falling into the no recorded income category, only those from four–person households have prevalence rates for any diagnosis of psychiatric impairment which, at 162 per thousand, are less than the aggregate figure for the cohort. There is little variation in prevalence among those from other household size categories, the rate varying between 234 and 235 per thousand among boys from the largest and the smallest homes and 243 and 245 among those from five–person and from three–person homes, respectively.

The introduction of controls for the income of the head of household has a similar effect to the use of controls for occupational status. Within socio-economic categories, the effect of household size on the prevalence of psychiatric morbidity is considerably reduced from that suggested in the zero-order analysis. In addition, consideration of the patterning of prevalence rates within income bands, produces a conclusion which is similar to that arrived at in the analysis of the interaction between household size and marital status: the original finding of a U–shaped relationship, with low rates in boys from four-person households and higher rates the more a household diverged from this norm, is a chimera.

Two–person households, all of which, by definition, fall into the one–parent family type, are something of an anomaly, but apart from them the more general tendency is for morbidity to increase along with an increase in household size.

10: HOUSEHOLD SIZE AND PARENTAL INCOME IN ONE–PARENT FAMILIES

The fact that two–person households appear to be something of an exception to the general rule that, taking income into account, the prevalence of psychiatric morbidity increases along with household size, prompts an analysis of the relationship between household size, income and the prevalence of disorder among one–parent families by themselves. The analysis must be accompanied by the standard caveat concerning the size of the population at risk in several of the cells forming the cross–classification.

Just under two–fifths of the boys from one–parent homes lived with no one else other than that parent; in the other three–fifths other children and, in a few cases, other adults were also present. There was little variation in the distribution of cohort members by household size within the reported income categories, but an unusually high proportion of those from homes in which the head has no reported income come from households with four–or–more–members.

TABLE 24: DRAFT BOARD DIAGNOSES BY HOUSEHOLD SIZE AND INCOME OF HEAD OF HOUSEHOLD IN ONE-PARENT FAMILIES

Head's Income (SEK)		Household Size 1963 — Serious Impairment 2	3	4+	Total	Any Impairment 2	3	4+	Total
>18000	(Rate)	111	205	269	174	218	323	308	270
	(n)	*55*	*34*	*26*	*115*				
<18000	(Rate)	105	188	200	157	222	289	333	270
	(n)	*171*	*149*	*95*	*415*				
No Record	(Rate)	176	176	217	193	235	353	350	324
	(n)	*34*	*51*	*60*	*145*				
Total	(Rate)	115	188	215	167	223	308	331	281
	(n)	*260*	*234*	*181*	*675*				

Table 24 shows the distribution of cohort members from one–parent homes in 1963 by collapsed categories of income and household size. It must be remembered that welfare benefits, alimony and child maintenance payments are not included in the income data.

There is a general tendency for the prevalence of psychiatric impairment among boys from one–parent families to increase as household size increases, but there is no systematic variation by recorded income.

Among boys from one–parent, two–person households the prevalence of severe impairment is very much the same as in the cohort as a whole, 115 per thousand. The rate for boys from one–parent, multi–person households is considerably higher, 188 per thousand, in the case of those from three–person families and 215 per thousand, almost twice the aggregate figure, among those from households containing four–or–more–persons.

Only 21 boys come from one-parent families with incomes falling into the upper quartile of recorded earnings and the great majority fall into the lowest quartile. Within each income category, boys from two-person households show considerably lower prevalence rates than those containing three or more members. Rates of serious impairment tend to be slightly higher among those from households with recorded incomes of more than 18,000 kronor than among those from households with less than 18,000 kronor, but the differences are slight. Among those members of the cohort from one–parent households in which no income was reported for 1963, a high prevalence of impairment is found in all categories of household size, with the highest rate of serious disorder occurring among those from the largest households

With the possible exception of those from the "no recorded income" category, the data suggest that the Swedish welfare system may have effectively eliminated the impact of financial differences among one-parent families.

Earlier analyses of the relationship between Draft Board diagnoses and being brought up in single parent families headed by widowed or, in certain circumstances, never–married people, have already indicated that being brought up by a single parent is not necessarily associated with a higher–than–average risk of disorder, even in the presence of low income. As soon as there is more than one child in the family, however, there is a sudden increase in the risk of impairment. Those affected are primarily the products of homes which have been disrupted by separation or divorce.

Being brought up in a one–parent, multi–child family is not conducive to later psychological health, regardless of the income coming into the household. In view of the stress which some writers have placed on the positive effect of sibling relationships and the hint that these may be able to compensate for the absence of adult role models (Hinde 1987), the finding concerning the negative implications of living in one–parent, multi–person households is unexpected.

11: PARENTAL MARITAL STATUS AND OCCUPATIONAL STATUS IN ADOLESCENCE

The 1970 Census provides information on both the marital status and the occupation of the head of the households containing members of the *Project Metropolitan* cohort. By 1970, when they were aged 17 years, twenty members had moved out from their parental homes and had set up their own households; people in this situation have been put into the "Other/Missing Data" category on both classificatory dimensions. The occupation data is relatively crude and does not allow the socio–economic classification which was produced for 1953 and 1963. It does, however, lend itself to a rough three–fold division into upper non–manual, lower non–manual and manual workers, which provides at least a semblance of a status hierarchy. The classification overlaps the socio–economic scheme used in the earlier data, but the two non–manual grades, in particular, have a relatively poor fit with the middle class categories used in the previous analysis. The relationship amongst the cohort members between the occupational and marital status of heads of households in 1970 and the Draft Board diagnoses of 1971–3, is shown in Table 25. In the case of 638 members of the cohort it was not possible to provide an occupational classification.

Among members of the cohort from households headed by widowed, never-married or separated or divorced individuals, the majority of whom are women, there is a considerably greater representation of the lower non–manual and unclassifiable household heads. The proportion of household heads falling into the lower non–manual occupational category is 48 per cent among those from homes headed by a separated or divorced person and less than half this, 22 per cent, among those from homes headed by a married couple. The equivalent figures for those from households headed by a never–married or by a widowed person are 38 per cent and 34 per cent, respectively. Conversely, few of the homes containing cohort members have non–married heads classified in the upper non–manual category. The percentage of household heads in the upper non–manual category is 34 among young men from homes headed by a married and cohabiting couple, 11 and 12 per cent among those from homes headed by widowed or by separated or divorced persons and only two per cent among the small number living with never–married heads of households. The percentage with unclassifiable occupations varies between 28, in the case of those living with widowed parents and six, in that of those living with married and cohabiting heads.

TABLE 25: DRAFT BOARD DIAGNOSES BY PARENTAL MARITAL STATUS AND OCCUPATIONAL STATUS 1970

Parental Occupation		Parental Marital Status 1970 — Serious Impairment						Any Impairment					
		M'd	Sin	Wid	S/D	Other	Total	M'd	Sin	Wid	S/D	Other	Total
U.NonMan	(R)	78	*	225	154		84	155	*	325	341		167
	(n)	*1909*	*8*	*40*	*91*	*0*	*2048*						
L.NonMan	(R)	94	132	164	156		113	191	237	264	281		216
	(n)	*1230*	*38*	*110*	*392*	*0*	*1770*						
Manual	(R)	117	162	110	207		125	215	243	207	340		226
	(n)	*2150*	*37*	*82*	*203*	*0*	*2472*						
nc*	(R)	147	*	132	217	148	165	249	*	209	341	278	268
	(n)	*346*	*18*	*91*	*129*	*54*	*638*						
Total	(R)	100	198	149	178	148	114	192	317	241	312	278	211
	(n)	*5635*	*101*	*323*	*815*	*54*	*6928*						

M'd: Married, cohabiting. Sin: Single (never married). Wid: Widowed. S/D: Separated or Divorced.

U.NonMan: Upper Non-manual Occupations. LNonMan: Lower Non-Manual Occupations. Manual: Manual Occupations. nc: Not classified (includes 20 cohort members who were heads of households in their own right).*

In general, and despite the crudity of the classifications used, the data on the prevalence of both any and of serious psychiatric impairment show a clear pattern.

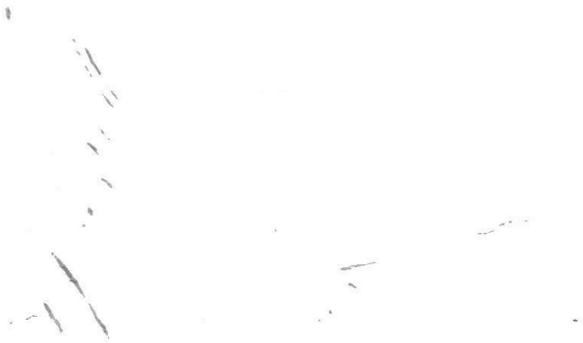
Repeating the pattern of earlier years, within each occupational category, members of the cohort from homes headed by a separated or divorced person have a considerably higher rate of impairment than boys from homes headed by a married and cohabiting couple. In the case of diagnoses of serious impairment, the difference between the two categories of parental marital status is relatively constant across occupational categories, with those from homes with separated or divorced having almost twice the prevalence of impairment found among those from homes with a married and cohabiting head. Living in homes headed by someone in a lower status occupation and living in homes headed by a separated or divorced person each act as an independent and additive factor, increasing the prevalence of disorder.

Also repeating the pattern of earlier years, members of the cohort living with never–married heads have impairment rates intermediate in size between those found among those from homes with separated or divorced or married and cohabiting heads.

In a departure from the pattern of previous years, however, relatively high rates of impairment are found among young men from homes which combine high occupational status and widowhood. The highest rate of serious impairment in any combination of the marital and occupational classifications occurs among the 40 cohort members from 1970 homes headed by individuals combining upper non–manual occupation with widowhood. Among the 82 members of the cohort coming from homes with widowed manual worker heads, on the other hand, the rate of serious impairment is relatively low, lower than that found in the cases of any other marital status category and the only group among those from homes headed by manual workers to have a prevalence of serious disorder lower than that characteristic of the cohort as a whole. No convincing explanation can be advanced for the apparent difference in the effects of parental bereavement between the various socio–economic groups at different ages.

Members of the cohort from households which have heads who cannot be placed in the occupational classification scheme, have high rates of disorder in each category of marital status.

The 1970 data show a strong relationship between parental marital status and psychiatric disturbance in the years immediately following. Although it may be the case, as has been argued elsewhere, that parental effects on children, including the effects of family disruption, are greater amongst younger children than they are amongst older, the *Project Metropolitan* data suggest that parental marital status is associated with considerable differences in psychological well-being amongst late adolescent boys. The effects of family disruption associated with separation or divorce are felt in all occupational categories; the effects of family disruption resulting from the death of a parent are especially pronounced among older boys from high status homes. The lesser lapse of time between the measurement of parental marital status in 1970 and the Draft Board examinations, which take place within the next three years, may of course, be one of the reasons why the effect of parental marital status appears to be so strong, relative to that of earlier years. That there is an effect, however, is undeniable.



SUMMARY AND CONCLUSION

Most adolescents do not develop psychiatric disturbance. When they appeared before the Draft Board, three–quarters of the boys in the *Project Metropolitan* cohort had no symptoms of psychiatric disturbance and only one–in–nine suffered from symptoms sufficiently pronounced as to give rise to severe functional impairment. Predicting those who will fall into the impaired category, especially on the basis of socio–demographic variables such as family background, age of mother, household size or socio–economic status, is likely to be a very inexact science.

For a host of reasons, including differences in genetic composition and biological capacity and a myriad individual developmental factors, people vary in their vulnerability to environmental stresses. In many cases, these stress factors are themselves embodied in subtle patterns of communication within inter–personal relationships which have, at best, a tangential relationship with the global structural measures revealed in epidemiological studies. From the perspective of the individual the occurrence of critical stressors may appear almost random. Nonetheless, certain aspects of family structure and the experience of changes in that structure during childhood do appear to be related to a greater vulnerability to psychiatric disturbance in adolescence.

Despite legal assertions that illegitimacy was not to lead to social stigmatization, for a boy to be born to an unmarried mother in mid–century Stockholm was to start life at a disadvantage. A similar disadvantage befell those who lived either in childhood or in adolescence in homes disrupted by separation or divorce. In each case, despite the length of time intervening, the experience is associated with a heightened prevalence of psychiatric disorder at the age of 18 years.

The experience of family disruption involving parental separation or divorce has negative effects on later mental health whenever it occurs and regardless of the socio–economic status of the household or of later changes in family structure.

The experience of change in the marital status of parents is also associated with a heightened prevalence of disorder. The greater the number of changes, the greater the risk of impairment: boys born to unmarried women, living with a married and cohabiting couple in mid–childhood, but with a separated or divorced parent at the age of 17 years, have a particularly high rate of impairment in late adolescence.

Stability in terms of marital status is not, of course, the same as stability in terms of household composition. This is particularly true in the case of households in which the head of household is single, separated or divorced. Where such households consist of the same people in 1953 and 1960 the implications for adolescent mental health are favourable; where changes take place, the implications are unfavourable.

Contrary to expectations, disruption of the family resulting from the death of a parent when members of the *Project Metropolitan* cohort were aged under seven years is associated with better–than–average mental health in adolescence, regardless of socio–economic status and other structural variables. When bereavement takes place in later childhood or early adolescence, the prognosis is less favourable, leading to rates of impairment which are somewhat higher than average. No support is forthcoming for the proposition that the death of a boy's mother, especially in early childhood, is associated with a greater risk of impairment than the death of his father. The low rate of impairment found among those members of the cohort who had suffered parental bereavement in early childhood suggests that the cautious conclusion reached by Tennant *et al* (1980), concerning the weak relationship between parental death and adult depression, can be extended to cover the case of more general psychiatric disturbance in adolescence.

The nature of the family in which the child is brought up is more important than its size, whether it is headed by one or by two parents, or the age of the child's mother when he is born.

The introduction of controls for family type and for differences in socio-economic status suggest that variations in household size have relatively little effect on the outcome of the socialization process.

Although the Stockholm data initially appear to provide some support for the notion that being reared in a two–parent, two–child family provides the best foundation for psychological health, further analysis suggests that by no means all departures from this ideal are associated with a greater risk of disturbance.

The norm of the two–parent, two–child family receives support in the finding that, overall, boys from this background in mid–childhood display the lowest rates of psychiatric impairment in adolescence and that there is a U–shaped relationship between household size and the prevalence of disorder. Analysed in conjunction with data on family structure and socio–economic status, however, this pattern turns out to be a statistical artifact. More generally, in both one–parent and two–parent families, the larger the household size, the greater the risk of impairment.

There is no evidence that having brothers and sisters provides some form of protection against the disturbance of family disruption by separation or divorce. In the face of such disruption, the one–parent, one–child family appears to do rather well and the one–parent, multi–child family does rather badly. In line with the conclusion reached by Blake (1981), in her review of the evidence concerning the intellectual development of only children, boys who are only children have favourable psychiatric prognoses in both one–parent and two–parent families.

The age of the mother when the cohort member was born also appears to have little independent effect on his later mental health. Controlling for marital status, children born to neither very young nor to relatively old mothers appear to be at a significant disadvantage. In particular, the Stockholm data provide no support for the proposition that to be born to a woman in her forties is associated with a heightened risk of disorder, rather the reverse. In virtually every analysis, boys born to mothers aged 40 years and over have the best prognosis.

The evidence relating to teenage mothers is less clear, but again the data do not support the notion that teenage pregnancy is necessarily problematic. In the case of boys born to married and cohabiting mothers, there is little to distinguish those born to teenagers from those born to women in their twenties and early thirties. Boys born to teenage mothers have a slightly raised prevalence of serious impairment but a slightly reduced rate of any disturbance in comparison with other members of the cohort born to mothers a few years older. For reasons which are unclear, the greatest risk of developing impairment lies with being born to a mother in her late thirties.

Variations in the socio–economic characteristics of households interact with family structure. Household occupational status and parental marital status at birth, in mid–childhood and at the age of 17 years, appear to have independent, additive effects on the prevalence of disorder in late adolescence. The prevalence of impairment is especially high among boys from backgrounds in mid–childhood which combine parental separation or divorce and low socio-economic status.

Interpretation of the analyses concerned with socio–economic status is made difficult by the fact that the main status measure is derived from occupational data and is of questionable relevance to the class position of households headed by women, which form the majority of those consisting of two–persons and of those headed by one parent.

Within broad income bands, boys from homes headed by a single parent have a higher prevalence of psychiatric disorder than do those from homes headed by a married and cohabiting couple, but the difference in rates is negligible in the case of those from families in which the head of the household has a relatively low recorded income.

Among boys from two–parent families, there is a clear tendency for the prevalence of disorder to increase as recorded income falls. Among those from one–parent families, there is relatively little variation in the prevalence of disorder between the various income categories. Coming from either a one-parent family at the age of ten years or a household in which the head has a low recorded income is associated with a heightened prevalence of psychiatric impairment in adolescence, but the two risk factors are not additive.

Examination of the relationship between the prevalence of disorder, household income and parental marital status among boys from one–parent families, provides further support for the proposition that it is not the number of parents which is important, but the nature of the roles involved and the way in which the family structure has come about. The single parent category is heterogeneous. Within each income category, boys from one–parent homes in 1963 who had been living in households headed by a widow or widower in 1960 have the lowest rate of psychiatric impairment. The highest rates occur among those from households which had either been headed by a separated or divorced person in 1960 or had experienced some form of family break–down between 1960 and 1963. Overall, the *Project Metropolitan* data suggest that the distinction between one–parent and two–parent families may be of doubtful sociological significance.

To a very large extent, structural variables are proxies for processes which take place at the inter–personal level. The measures used in the present analysis are crude, capturing little of the subtleties characteristic of family interaction. The time period involved, between birth and late adolescence, gives great opportunity for other events to intervene. What is perhaps remarkable, is that parental marital status at birth or mid–childhood, the type of family in which a child is living at the age of ten years and the socio–economic characteristics of the household appear to exert so strong an influence on psychological health in late adolescence.

Boys who were born and brought up in a stable high status family, headed by a married couple, or who suffered the death of a parent in early childhood, had a considerable psychological advantage over those from other backgrounds.

Boys who were brought up in homes characterised by changes in parental composition, especially where families were disrupted by divorce or separation, were at a considerable disadvantage. Age of mother and size of household were, by comparison, of little significance and the distinction between one–parent and two–parent families hides as much as it reveals.

The *Project Metropolitan* cohort was born and brought up in a particular place at a period of great change in the nature of family and marital relationships. It is unlikely that the experience of any other cohort will be the same and it is therefore unwise to generalise in too much detail from the experience of those born and brought up in Stockholm between 1953 and 1973. At the same time, it seems likely that the importance of stability in parental figures will remain a feature of successful child–rearing and that the nature of the relationships between parents will continue to form an important element in the ecology of the family and child development.

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